

small air forces observer

vol. 39 no.2 (154)
October 2015

USA \$5.00
Canada & Mexico \$6.00
All others \$7.00



Gooney Birds: Libya, Egypt, & Mauritania
Trinidad & Tobago Cessna 337 Skymaster
North Korean People's Air Force: Part 15
Dutch Military Aviation 1914-1915
Exotic Birds Part 4

vol. 39 no. 2 (154)

October 2015



Celebrating the end of the Korean War, Kim Il-Sung's "Victory Parade" through the bombed out rubble of P'yongyang featured a flypast of 70 KPAF aircraft, including ten new Ilyushin Il-28 "Beagle" twin-jet light bombers. (Author's Collection)



On 21 September 1953 Snr Lt No Kum-Sok flew MiG-15bis "Red 2057" to Kimpo AB, South Korea. Surprising everyone and landing "against traffic", No taxied off the runway and onto the PSP (pierced steel planking) "alert pad" at the end of the runway, coming to a stop alongside a 334th FIS F-86F. (USAF Photo)



Lt No's MiG was quickly moved "out of sight" into a Kimpo AB hangar where it was photographed by USAF Intelligence personnel. The next day it was disassembled and loaded aboard a Douglas C-124 Globemaster and flown to Kadena AB, Okinawa, where it was flown on 11 test flights by two USAF test pilots, Captain H. E. "Tom" Collins and the famous Major "Chuck" Yeager. Afterwards the aircraft was disassembled and for two months each component underwent a close evaluation by a team from Air Materiel Command's (AMC's) "Air Technical Intelligence Center". (USAF Museum Photo)



In February 1954, the MiG was shipped to Wright-Patterson AFB (WPAFB), Ohio, where it was reassembled, examined, evaluated, and exploited for two years by AMC's "Flight Test Division". Afterwards it was returned to its KPAF markings and consigned to the new USAF Museum, also located at WPAFB. (Robert F. Dorr Collection)

SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearinghouse

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SUBSCRIPTION RATE: Annual subscription to four issues of the paper edition costs \$20.00 in the USA, \$24.00 in Canada and Mexico, and \$28.00 for airmail to the rest of world. Four issues of the cyber editions cost \$12.00. Payment may be made in currency, by International Money Order, by a check in US dollars, or via PayPal to safo@redshift.com (add 7% for PayPal fee). New subscriptions begin with the next issue published after payment is received. If you desire otherwise, specify which back issues are desired. Send remittance to Jim Sanders, 27965

Berwick Dr., Carmel, CA 93923 USA.

SMALL AIR FORCES OBSERVER (USPS 439-450) is published quarterly for \$20.00 (USA) \$24.00 (Canada & Mexico), and \$28.00 for all others, by the Small Air Forces Clearinghouse, 27965 Berwick Dr., Carmel, CA 93923. Publication entered at Carmel Valley, CA 93924. POSTMASTER: send address changes to Small Air Forces Clearinghouse 27965 Berwick Dr., Carmel, CA 93923.

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The Sydney Award. SAFO Member Susan Cross has provided a generous donation to set up a memorial fund dedicated to her parents, Richard E. Cross and Naidene Denton Cross. After consultation with the Editorial Board and Susan, it has been decided to use this fund each quarter to provide a year's subscription to SAFO for the person who has contributed the most exciting series of articles to SAFO. The honoree this quarter is Pablo Calcaterra for his series on Argentine aircraft during the Malvinas conflict.

Now to the task of naming the award: I would like to name it after one of the now deceased members who contributed to SAFO. Many names come to mind: Nick Waters, Sid Napier, Frans Scheve, to name just a few. I finally decided to call it the Sydney Award.

COVER COMMENTS: Resplendent in its KPAF civil transport livery, Kim Il-Sung's Ilyushin Il-14P "Crate" executive transport (#535) is currently on display at P'yongyang-Sunan International Airport. (Andrés Ramirez via Author)

UNITED STATES POSTAL SERVICE® Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title: SMALL AIR FORCES OBSERVER

2. Issue Date: 9/1/15

3. Issue Frequency: Quarterly

4. Issue Number: 4

5. Issue Date Range: 9/1/15

6. Issue Price: \$28.00

7. Complete Mailing Address of Known Office of Publication (Not printer): 27965 BERWICK DR., CARMEL, CA 93923

8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer): SAME

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor: JIM SANDERS, 27965 BERWICK DR., CARMEL, CA 93923

10. Complete Mailing Address of the Publisher: JIM SANDERS, 27965 BERWICK DR., CARMEL, CA 93923

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None

12. Tax Status: For completion by nonprofit organizations authorized to mail at nonprofit rates. (Check one)

13. Publication Title: SMALL AIR FORCES OBSERVER

14. Issue Date: 9/1/15

15. Issue Frequency: Quarterly

16. Issue Number: 4

17. Issue Date Range: 9/1/15

18. Issue Price: \$28.00

19. Complete Mailing Address of Known Office of Publication (Not printer): 27965 BERWICK DR., CARMEL, CA 93923

20. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer): SAME

21. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None

22. Tax Status: For completion by nonprofit organizations authorized to mail at nonprofit rates. (Check one)

13. Publication Title	14. Issue Date	15. Issue Frequency	16. Issue Number	17. Issue Date Range	18. Issue Price
SMALL AIR FORCES OBSERVER	9/1/15	Quarterly	4	9/1/15	\$28.00
19. Complete Mailing Address of Known Office of Publication (Not printer)	20. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)	21. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities	22. Tax Status	23. Publication Title	24. Issue Date
27965 BERWICK DR., CARMEL, CA 93923	SAME	None	For completion by nonprofit organizations authorized to mail at nonprofit rates. (Check one)	SMALL AIR FORCES OBSERVER	9/1/15
25. Issue Frequency	26. Issue Number	27. Issue Date Range	28. Issue Price	29. Complete Mailing Address of Known Office of Publication (Not printer)	30. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)
Quarterly	4	9/1/15	\$28.00	27965 BERWICK DR., CARMEL, CA 93923	SAME
31. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities	32. Tax Status	33. Publication Title	34. Issue Date	35. Issue Frequency	36. Issue Number
None	For completion by nonprofit organizations authorized to mail at nonprofit rates. (Check one)	SMALL AIR FORCES OBSERVER	9/1/15	Quarterly	4
37. Issue Date Range	38. Issue Price	39. Complete Mailing Address of Known Office of Publication (Not printer)	40. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)	41. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities	42. Tax Status
9/1/15	\$28.00	27965 BERWICK DR., CARMEL, CA 93923	SAME	None	For completion by nonprofit organizations authorized to mail at nonprofit rates. (Check one)

UNITED STATES POSTAL SERVICE® Statement of Ownership, Management, and Circulation (Requester Publications Only)

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8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer): SAME

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11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None

12. Tax Status: For completion by nonprofit organizations authorized to mail at nonprofit rates. (Check one)

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(APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$40. International payment is best handled via Paypal at iansharyn@bigpond.com.au). Web Site: www.apma.org. All articles have b&w and color photos and excellent scale drawings.

3/14 (28 pages) "Fairey Gannet, 724 Squadron" 9 pages on RAN Gannets inc. 9 profile drawings, top and bottom plan views, and 9 photos of museum RAN Gannet. "What's it all about, Alfie" story of a RAAF airman who flew in Beaufighters during WWII inc. 3 photos of RAAF Beaufighters. Other articles of interest inc. "Italian Medium Tanks of WWII" and "The Paravane".

3/15 (27 pages) "Bulgarian Bf 109E-4" 2 pages inc. one photo, one 2-view, and 2 profile drawings. "Royal Hellenic Air Force: A Brief History" 4 pages inc. 12 color profiles (4 Harvards, 4 Hurricanes, and 4 Spitfires). Other articles include "WWI Armoured Cars", "Target Tugs for the Luftwaffe", "The Scale Colour Myth", Lewis Light Machine Gun, & "Tito's Navy".

AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Pfenninggldf 18/2/14, A-1160 Wien. Write for free sample.

2/15 (44 pages) "Seeflieger Franz Falk" 9 pages inc. 5 photos (Hansa-Brandenburg W.18). "SAAB 105 Upgrade" 2 pages inc. 5 photos (one in color). "Thailändisches Luftwaffen Museum" 5 pages inc. 2 tables listing aircraft at the museum and 9 photos [F-5A, Hoffman H-36 Dimona, DA 42 Twin Star, Vought V-93S, Curtiss Hawk III, Boeing E-100, Spitfire FR.XIVe, Sikorsky S-55 (color), & T-33A].

FRANCE

AVIONS: Toute l'Aéronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 71 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

#205 Mai/Juin 2015 (96 pages) "Aéronautique navale 1940" 19 pages inc. 28 photos, 16 color profiles [MS.406

(13), Potez 542, Bloch 152, & Caudron C.445]. "1945: le jour de gloire du Normande-Niemen" 26 pages inc. 47 photo and 9 color profiles (Yak-3). "1914: La naissance du bombardement en France (fin)" 7 pages inc. 9 photos and 2 color profiles (Blériot XI & Voisin LAS). "Les derniers pilotes de chasse de la ML-KNIL (fin)" 9 pages inc. 20 photos and 3 color profiles [P-51D; (2) Dutch & one Indonesian]. "6 juin 1944, le jour le plus long (3^e partie)". 22 pages inc. 30 photos and 9 color profiles [B-26, A-20, Spitfire (2), P-51 (3), P-47 (2)]. "Columbia XJL-1" 8 pages inc. 15 photos.

#206 Juillet/Août 2015 (96 pages) "6 juin 1944, le jour le plus long (4^e partie)" 13 pages inc. 22 photos and 8 color profiles [Typhoon (4), Spitfire (2), Bf 109, & P-51]. "Adolphe Pégoud: Inventeur de l'acrobatie aérienne et premier as de l'histoire de l'aviation (1^{re} partie)" 16 pages inc. 29 photos. "Le GC I/6: Un groupe franco-tchecoslovaque dans la fournaise" 22 pages inc. 38 photos and 6 color profiles & one color 3-view (all MS.406)." "Un Caudron CR.714 est exposé en Pologne" 2 pages inc. 8 photos. "Avions japonais et étoile rouge" 18 pages on Japanese aircraft carrying red stars inc. 30 photos and 6 color profiles (Ki-10, A5M2, Ki-27, Ki-15, Ki-46, & MC-20). "Fancesco Brach Papa: Pilot de guerre et de records" 18 pages inc. 41 photos.

#207 Septembre/Octobre 2015 (94 pages) "Les Français Libres dans la Bataille d'Angleterre" 24 pages inc. 41 photos and 8 color profiles [Hurricane (6) & Spitfire (2)]. "ERC 572 + ERC 574 = GC III/5: Une équation impossible (1^{re} partie)" 10 pages inc. 11 photos (Spad 510 & Dewoitine D.371) and one color profile (Spad 510). "Adolf Pégoud: Le premier as de l'histoire de l'aviation (2^e partie)" 26 pages inc. 52 photos and 3 color profiles (Blériot XI-2, Morane-Saulnier Type L, & Nieuport X). "Blackburn T.4 Cubaroo: 1000ch ne suffirent pas" 12 pages on the ugly biplanes designed to carry a torpedo with emphasis on the Blackburn T.4 inc. 19 photos. "NC-3021 Belphégor: Le monstre de la haute altitude (1^{re} partie)" 20 pages on French high altitude research aircraft with emphasis on the elegantly

grotesque NC-3021 inc. 32 photos and a color 2-view drawing.

GERMANY

IPMS Deutschland Journal. Website: ipmsdeutschland.de. All color. Subscription: Europe 36 E; others 40 E.

1/2015 3 (36 pages) "Versuchs-jäger EWR VJ101" 9 pages on constructing a 1/72-scale diorama of the VTOL aircraft on a test platform inc. 28 photos. "Fokker D.XXIII" 6 pages on a 1/48-scale model built from the RS Models kit inc. 8 photos. "Dassault MB.450 Ouragan" 8 pages on building the 1/72-scale Valom kit inc. 17 photos. "Mitsubishi A5M4 Claude" 3 pages on building the 1/32-scale Special Hobby kit inc. 7 photos.

ITALY

JP4 Menslie di Aeronautica e Spazio. Via XX Settembre, 60-50129 Firenze, Italy. Email: jp4@dueservice.com. Website: www.ediservice.it.

Aprile 2015 (100 pages) Color photos: India Su-30 & TD2; Iranian Saeqeh II; Lugansk Su-25; Vietnam C295; Saudi PC-21; & Yemen MiG-29. "Eurofighter italiani: Guardiani del Baltico" 8 pages inc. 10 photos (Polish MiG-29). "Incidenti Militari: one page inc. 5 photos (Mozambique An-26, Japan Kawasaki OH-1, & Tanzania Chengdu F-7).

Maggio 2015 (100 pages) Color photos: Afghan MD530, Argentina Tucano, Philippine C295, Mexico C295, Malaya A400, Pakistan Z-10, Syria Su-22, & Surinam Chetak. "Rifornimento agli Jastrzab" 3 pages on Polish F-16 inc. 4 photos. "Primo volo del Caproni Ca-3R" 2 pages on reproduction Ca-3R inc. 4 photos. "Il Tracker e i suoi piloti" 2 pages on Italian S-2 inc. 7 photos.

"Incidenti Militari: 1½ pages inc. 7 photos (South Korea AS565, Syria Mi-14, Yemen CN-235, Portugal Epsilon, & Bangladesh Chendu FT-7).

Giugno 2015 (100 pages) Color photos: Belarus Yak-130, Cyprus AW139, & Kazakhstan Su-30. "L'Aeronautica Azera" 2 pages on Azerbaijan inc. 5 photos (MiG-29, Su-25, & Mi-17). "I Nieuport dello Zar" 2 pages on Imperial Russian Nieuports w/ 8 photos. "Incidenti Militari: one page inc. 5 photos (Indonesia F-16, Zimbabwe Nanchang K-8, & Cameroon Harbin Z-9).

The Korean People's Air Force

in the Fatherland Liberation War

Part 15: From Then Until Now

Douglas C. Dildy

The KPAF ended the Korean War with, according to one Russian history, 412 aircraft, including “at least 200 MiG-15s”, 39 Ilyushin Il-28 twin-jet bombers and 53 propeller-driven warplanes (Il-10s, La-11s, and Tu-2s).

More importantly, the KPAF emerged from the conflict with a cadre of combat experienced fighter pilots and a number of experienced (but not combat veteran) bomber aircrews. While most Soviet and Chinese histories denigrate and minimize the KPAF's contribution to the air war in Korea as a “token effort”, many Russian pilots who fought in the Korean War praised their Asian cohorts, saying “they fought bravely and selflessly.” Chinese and Korean alike were commended “for their courage and pluck in battle. If they latched onto the tail of an enemy fighter, it was a fight to the finish with no breaking off... [however, they] often rushed at the enemy without checking their rear first, which led to heavy losses on their part. They paid no attention to whatever was going on behind them, and the American pilots often took advantage of this.”

Specifically, one Russian Korean War veteran, Guards Colonel (retired) Boris S. Abakumov, recalled that in the winter of 1951/52, “During that time Chinese and Koreans flew from our airfield. They were located at the opposite end of our runway and we would meet them as we took off. They would go up first – then we would, we would all reverse course and form up our group on the way to the covering force area [CAP area] in the sky. The Chinese, by their own choice, flew without our top cover [and consequently suffered heavy losses to USAF F-86s]. The North Korean pilots also suffered heavy losses and after their first battle in these conditions [against the F-86s] our command decided to support them; as a result we would fly as their second echelon where teaching them was difficult, but the cadre that would form the air forces of the DPRK was created in this manner.”

Reestablishing the KPAF in North Korea

Beginning the day after the Armistice went into effect, the KPAF's units, aircraft and personnel began moving to North Korean airfields as they were “rehabilitated” and made available for operations. One of the main “new” bases was Namsi, the focal point of so many USAF/UNC bombing raids during the war. It became the KPAF's new “main depot” and was the launching point for the air arm's first post-war “operation”.

For the North Korean “Victory Parade” on 15 August 1953 – the eighth anniversary of the Imperial Japanese surrender, marking the end of WWII – some 70 aircraft gathered at Namsi and after taking off, flew in a stream of warplanes to Pyongyang. Along the main boulevard of the bombed-out city, flowed a parade of troops, T-34 tanks and other heavy mechanized and motorized equipment, while the 70 KPAF aircraft – including 10 of the new Il-28 jet bombers – flew overhead. After “passing in review” before Kim Il-Sung, his entourage, Soviet and Chinese envoys, and thousands of North Koreans, the impressive show of air power returned to Namsi, landing there or at nearby airfields.

One of these was Sunan, located five miles (8km) north of Pyongyang. Construction of this airfield had begun in 1952, but repeated bombings kept it from ever becoming operational. It consisted of a single, concrete north-south runway centered in a large field a half mile (one km) east of an large old stone church. To the west side was a large, freshly finished concrete parking apron, but otherwise the runway was surrounded by destroyed buildings, rubble and bomb craters. The stone church was untouched by the bombings and became the officers' barracks while a “tent city” was erected around it for the mechanics and other enlisted personnel.

During the first week in September the 1st FAD's 2nd FAR moved from Uiju to this “new” airfield, receiving 16 shiny new MiG-15bis, freshly assembled from crates shipped by rail from Andong, PRC. Operations at Sunan began on 21 September with the take-off of Snr Lts Chae Byung-Zae and No Kum-Sok on routine “round robin” patrols. Taking off to

the north, a few minutes apart the two MiG-15s climbed to 7,000m (22,965ft) and flew to the Chongchong River, making a wide left turn to sweep down the west coast. Abeam Pyongyang, the flight plan called for the MiGs to turn towards the capital and begin descent, arriving on a long final approach to Sunan from the south. But No continued south, landing at the USAF's Kimpo AB less than 20 minutes later.

No had made it to freedom, and had delivered to the Americans the long-sought MiG-15 jet fighter, but the defection caused major tremors within the KPAF. Five fellow pilots and supervisors – only one of which was aware of No's intentions – were executed and Major General Wang Yung, who had commanded the KPAF through its birth, development and three years of combat, was cashiered in disgrace.

Kim replaced Wang with Admiral Han Il-Moo, the commander of the Korean People's Navy. One of Han's first orders was to modernize the KPAF by making it an all-jet air force. Over the next three years the USSR and China transferred large numbers of MiG-15bis to the KPAF, enabling the conversion of the 10th CAD's regiments to jet fighters and the establishment of additional fighter aviation regiments, such as the 46th FAR based at the "rehabilitated" Wonsan airfield and the 60th FAR which was based at the new Pukch'ang-West airfield, built along the Taedong River (with aircraft shelters burrowed into the mountain just to the east) north of Sunch'ŏn.

Although clearly prohibited by the terms of the Armistice agreement, the North Koreans viewed the movement of the KPAF's aircraft from bases in China to its homeland airfields as simply repositioning its "aviation materiel" from their deployed, wartime bases to its home airfields, and were not going to be denied by legal technicalities. Additionally, the replacement of propeller-driven warplanes with modern jet fighters was exercised under the provision that "worn out or damaged aircraft can be replaced with equipment of the same type." (Loosely, the Koreans viewed "type" as "role" – i.e., fighter, bomber, etc. – whereas Western nations viewed "type" as type, such as MiG-15 or F-86.) The Americans objected strenuously to these Armistice violations and sought evidence of them to present to the UN by flying reconnaissance missions along the coasts of Korea, taking photographs of airfields within visual range.

Missions were commonly conducted by North American RB-45C Tornado four-jet photo-recon aircraft (91st Strat Recon Sqdn, based at Yokota, Japan) flying at 30,000 feet (9,144m) three miles off the coastline, heavily escorted by F-86F Sabres (335th FIS) deployed to Osan AB, Korea, weaving above and behind the Tornado to maintain their .82 Mach combat speed. On 5 February, southbound off North Korea's west coast approximately abeam Pyongyang, one of these missions was challenged by eight MiG-15s (KPAF unit unknown), one pair attacking the reconnaissance jet while another attacked the four-ship of close escorts, while the other two pair each attacked the other two four-ships of Sabres. The RB-45 (callsign "Osage 111") was not damaged and after making one pass, the MiGs turned towards land, with six F-86s in "hot pursuit". Two MiG-15s were shot down in the engagement while one F-86 was slightly damaged. (Note 1)

The defeat prompted Kim to petition the USSR for more modern equipment and the next year the weary and obsolescent MiG-15bis was replaced by the very much improved, afterburning MiG-17F "Fresco-C" day fighter, followed two years later by radar-equipped, all-weather MiG-17PF "Fresco-Ds". The Frescos were known to be based at Namsi, Wonson, and were used to establish three new jet fighter regiments at the newly constructed air bases at Pungchon, Taetan, and Hyonni, arrayed north of the Demilitarized Zone (DMZ). About this time (1956) the KPAF was reorganized along geographical lines with the 1st Air Combat Division (ACD; HQ at Kaech'on AB) responsible for north/west sector, the 2nd ACD (HQ at Toksan AB) responsible for the east coast, (Note 2) and the 3rd ACD (HQ at Hwangju AB and including the new airfields mentioned above) forming the front-line defense just "behind" the DMZ. Also at this time the KPAF regiments lost their role-specific (fighter/bomber/etc.) identifiers and became generic "aviation regiments" or ARs.

In the mid-1960s, as the Vietnam War was escalating rapidly and the US began a bombing campaign against North Vietnam (NVN – Operation "Rolling Thunder"), the fledgling Vietnam People's Air Force (VPAF) found itself subjected to heavy combat (and accident) losses while it was still trying to expand its forces, train its pilots and GCI controllers, and develop its tactics and doctrine. To assist the VPAF through this trying period, the KPAF

deployed a small two-squadron regiment of MiG-17Fs (joined later by a third squadron flying MiG-21s) to NVN to assist in that nation's air defense. (See Sidebar) By the time "Rolling Thunder" ended on 2 November 1968, the KPAF regiment – known as "Group Z" by the VPAF – claimed 26 kills. Losses, however, were heavy with 14 MiGs destroyed and 11 pilots killed. The unit was disbanded and the surviving pilots returned to North Korea in February 1969.

The Soviet-made Frescos were supplemented by Chinese-built Shenyang F-5s (MiG-17F), the type proving to be well liked within the KPAF, some 150 remaining operational well into the 1990s. Meanwhile, the KPAF's jet bomber force – now known to consist of the 8th Air Division and its 24th Bomber Aviation Regiment – was established at Uiju AB. In the early 1960s the PRC began "rebuilding" the KPAF, as a "buffer" against feared American aggression as the Cold War, the Vietnam War and other various third-world insurgencies resulted in the USA taking a more bellicose stance towards Communist expansionism. In addition to the Shenyang F-5 (and F-6 – see below) jet fighters, the PLAAF also transferred as many as 70 Harbin H-5s (Il-28 clones) and HZ-5 reconnaissance aircraft to North Korea – allowing the establishment of two additional bomber regiments – until the mid-1960s when relations between the two nations deteriorated. The H-5s were based at Changjin-up and Orang ABs on the east coast but eventually almost all were grounded due to lack of spare parts. (Note 3)

More Modern Reinforcements

In 1961, the USSR and DPRK signed a Mutual Aid and Defense Treaty that included, among other provisions, for the reinforcement of the KPAF with more modern Soviet-made military equipment, including 15 MiG-19S "Farmer-C" transonic interceptors as well as 72 S-25 Berkut ("Golden Eagle" – known in NATO as the SA-1 Guild) surface-to-air missile (SAM) launchers, these being received in 1962. Two years later KPAF purchased 15 former Iraqi AF MiG-19s, sold by Egypt, and these were later supplemented by 100 Shenyang F-6Cs (Chinese-built MiG-19Ss). The type was used to establish two new fighter regiments in the 3rd ACD, at Hwangju and Koksan ABs, as well as replace MiG-15/17s in the 35th AR (Kaech'on AB), 46th AR (Wonsan AB),

57th AR (Onchon-up AB), and 72nd AR (Hwangsuwon-ni AB).

With the deterioration of relations with the PRC, the KPAF returned to the USSR for more modern military equipment, including a variety of variants of the excellent MiG-21 "Fishbed" supersonic interceptor as well as the first of an eventual 270 S-75 Dvina (named for a river in northern Russia – NATO's SA-3 Guideline) SAM systems. The first "Fishbeds" were the missile-armed (Vympel K-13/AA-2 Atoll) MiG-21F-13 "Fishbed-C", of which 80 were received in 1966-67, followed by 89 much more effective (cannon and missile armed) MiG-21PFM "Fishbed-Ds". By 1970-71, the KPAF had 50 MiG-21F-13s and 46 MiG-21PFMs on strength – growing to 120 MiG-21s total by 1977 – allowing each of its ten fighter regiments to have one squadron of the supersonic interceptor assigned.

The USSR stopped supplying arms to the impulsive, mercurial North Koreans in 1974 and by the time shipments resumed, in September 1984, the number of operational "Fishbeds" in KPAF service had dwindled to 50. The next year these were supplemented by 150 new and improved MiG-21MF "Fishbed-J" interceptors. These were augmented in 1989-91 by the purchase from China of 30 Chengdu F-7Bs (improved MiG-21F-13 derivatives). In 1999 the North Koreans purchased 38 MiG-21bis "Fishbed-L" interceptors from Kyrgyzstan, aircraft left over from the disintegration of the Soviet Union that were not incorporated into the Kyrgyzstan AF. These numerous on-again-off-again deliveries also included approximately 50 MiG-21U/US/UM "Mongol" two-seat trainers. These were supplemented in 1989-91 by the purchase from China of some Guizhou FT-7B two-seaters (MiG-21UM copies).

The MiG-21 proved to be the mainstay of the modern KPAF. As of 2007 the "Fishbed" force had been reorganized with twelve squadrons forming the 46th AR at Wonsan (including Chengdu F-7Bs), 56th Guards Aviation Regiment at Toksan AB (2nd ACD/East Sector), 86th AR at Koksan AB and an unknown regiment at Hwangju AB (both assigned to 3rd ACD/South Sector), with a squadron serving with the MiG-23MLs in the 60th AR at Pukch'ang-West AB.

When Soviet arms shipments to the DPRK resumed in 1984, they included the first batch of

(eight) “swing-wing” MiG-23ML “Flogger-G” tactical fighters and (two) MiG-23UB “Flogger-C” conversion trainers. These were followed by additional shipments totaling 40 MiG-23MLs and ten MiG-23UBs. Finished in an “air superiority gray” paint scheme, the “Floggers” are believed to equip two squadrons in the 60th AR at Pukch’ang-West AB and the 58th AR at Toksan AB.

During this intermediate period the KPAF reestablished its ground attack capability with the acquisition of 25 Sukhoi Su-7BMK “Fitter-As” and Su-7UMK “Moujik” two-seat trainers. These were operated by the 55th AR at Sunclŏn AB and served until they were replaced in the late-1980s with 32 modern and effective Su-25K “Frogfoot-As” close air support attack aircraft and four two-seat Su-25UBK “Frogfoot-B” combat trainers. The Soviet-supplied Sukhois were augmented with 50 Nanchang A-5 “Fantans” – the dedicated fighter-bomber derivative of the MiG-19/J-6/F-6 “Farmer”. These were issued to the 72nd AR based at Hwangsuwon-ni AB (2nd ACD). About this time, the four remaining regiments of MiG-19S/F-6Cs were re-rolled as a ground attack force that, along with the “Fantans”, supplemented the “Frogfoots” in supporting KPA operations.

Transports, Trainers and Helicopters

The KPAF returned to its homeland with only a handful of transports, a few old, well-worn Lisunov Li-2 “Cabs” (Soviet-made C-47s) and Ilyushin Il-12T “Coaches”, based at Sunan, just north of Pyongyang (in what was probably, at that time, the 5th Aviation Transport Regiment, now the 5th Air Transport Division). Soon afterwards these were supplemented and then supplanted by five Il-14P airliners (serialed in the range 701-709) with an additional Il-14S VIP transport (#535) that became the personal aircraft of Kim Il-Sung, now preserved as a museum piece. These short-haul transports were adequate for moving people, supplies, and small equipment within North Korea, especially across the mountains between the cities along narrow eastern coastal strip (Wonsan, Hamhung [DPRK’s second largest city], Chongjin and other points northeast) and those on the broad western plain such as Pyongyang and the nation’s other major cities. A dozen years later (beginning in 1966) they were replaced by nine Antonov An-24 “Coke” twin-turboprop airliners (serialed in the range P-527 to P-537).

Beginning 21 September 1955, the nation’s “civil aviation” system was administered by the DPRK Ministry of Transportation but has always been operated by the KPAF, with military personnel maintaining the aircraft and KPAF pilots and aircrew flying them. The North Korean “airline” was originally known by the abbreviation UKAMPS (meaning/translation as yet unknown) but in the mid-1970s, as it expanded service westwards, it was renamed the Chŏn Minhang —Korean Airways, operated by the Civil Aviation Administration of Korea. It was renamed Air Koryo in March, 1992.

For longer distances, by 1968 four Il-18 “Coot” four-engine turboprop airliners (similar to the Lockheed Electra). One of these, the Il-18S “Salon” (#825, later #525), was used as the government VIP transport and the other three (#834 through #836) saw service in the Chosonminhang – Korean Airways flying to Shenyang and Beijing, PRC, connecting there with Aeroflot services to Moscow. Jet operations began in 1975, when the first of four Tupolev Tu-154B “Careless” three-engined airliners (like the Boeing 727) was delivered for services from Pyongyang to Moscow, Prague, and East Berlin. However, because the Tu-154 did not have the sufficient range, the airliner had to land at Irkutsk and Novosibirsk for fuel. Consequently, when the first of five Ilyushin Il-62M “Classic” four-engined airliners (three of these in a government VIP configuration) was delivered in 1982, the Chosonminhang could finally offer direct non-stop service to Moscow, with Sofia and Belgrade being added to the airline’s destinations. (Note 4)

Domestic service was upgraded to jets in 1984 with the acquisition of two Tupolev Tu-134B-3 “Crusty” twin-engine jetliners, these currently being supplemented with two Antonov An-148-100B regional airliners. For bulk cargo operations, in August-December 1990 the KPAF purchased three modified Ilyushin Il-76TD “Candid-B” transports, built without the military tail-gun position.

Without doubt, the most numerous transport aircraft in North Korean service is the ubiquitous Antonov An-2/Nanchang (now Shijiazhuang) Y-5 “Colt”, a bulky, box-sided biplane mounting a powerful (1,000 hp) Shvetsov ASh-62IR 9-cylinder supercharged radial engine. At least a half-dozen Soviet-built 12-passenger An-2Ts were acquired in the mid- 1950s, one of which was captured by ROK

security forces during a special forces “insertion” (see photo and caption). Following a defeated attempt to assassinate ROK President Park Chung Hee at his residence in January 1968 (28 KPA commandos KIA, 66 South Koreans killed), Kim Il-Sung ordered the expansion of the KPA’s air-delivered special forces, resulting in the purchase of 84 An-2Ts built by PZL Mielec (Poland), as well as another 15 float-equipped An-2V seaplanes from the same source. Over the subsequent years an additional 250 Chinese-built Y-5 examples have also been acquired. While some are used for liaison duties between various KPAF bases and as trainers for transport pilots, the bulk of the approximately 200 An-2/Y-5s currently estimated on strength are employed by 12 light transport squadrons, most of them working closely with KPA commandos and KPAF helicopter assault/transport units, trained for special forces insertion and offensive air-land operations.

KPAF pilot training program moved from Yanji, PRC, to their home country with approximately 40 Yak-18 primary and ten Yak-11 advanced trainers. As the KPAF expanded in the late-1950s and the next decade, 100 Nanchang CJ-5s (licence-built version of the Yak-18) and CJ-6s – an improved, more powerful (285hp Zhouzhou HS6A), tricycle gear adaptation of the basic Yak-18 design, exported under the designation “BT-6” – were acquired. For jet transition, to replace the few remaining Soviet-supplied MiG-15UTIs, a dozen Aero L-39 “Albatros” trainers were obtained from Czechoslovakia in the 1970s, after which the student pilots destined for fighter units received further training in Shenyang FT-2s (Chinese-built MiG-15UTIs) and FT-5s, the Chinese-developed two-seat trainer version of the MiG-17.

All KPAF aviation training is administered by the 8th Aviation Training Division. Korean cadets are taught at the Kimcha’ek AF Academy at Chongjin AB where, in addition to military and academic training, they learn to fly on the BT-6. Primary flight training is conducted at Kangdong AB, also on the BT-6, after which the graduates go to jet transition (L-39, FT-2s and -5s) at Samjiyon AB, transport training (Y-5s) at Hyesan AB, or initial helicopter training (Mi-2) at Kilchu Airfield. Additionally, there is the Flight Officers School (“Unit 797”) at Kyongsong AB that provides training for aircrew other than pilots in the BT-6, FT-2 and FT-7.

The KPAF began operating helicopters in 1956 with the arrival of the first of some 50 Mil Mi-4 “Hound-A” medium utility helicopters, later supplemented with the Chinese-built Harbin Z-5 version. The Mi-4s were initially based at Sochon AB, with a small number of Mi-4ME anti-submarine warfare (ASW) were based at Changjin-up airfield. The (unknown designation) Mi-4 helicopter regiment became the basis for the 6th Helicopter Transport Division, headquartered at Chaegun-dong AB.

Widely televised American helicopter operations during the Vietnam War motivated increased interest in this form of military aviation, so in 1979-83 the KPAF acquired some 140 Polish-built (in the WSK “PZL-Świdnik” factory) improved Mi-2s. While some of these were Mi-2R agricultural and Mi-2T light utility transport versions, most were Mi-2U trainers and Mi-2US/URN “gunship trainers”. Mounting a fixed 23mm NS-23 cannon and four 7,62mm PKT machine gun pods or two pods containing 16 57mm S-5 unguided rockets, the Mi-2US/URNs were used to establish helicopter-gunship units at Kanch’on, Kowon, Pakhon and Samjangkol airfields.

These were followed by approximately 80 Mi-8T (unarmed transport) and Mi-8TV (armed assault/transport) “Hip-Cs”, supplemented shortly afterwards by a number of improved Mi-17 “Hip-Hs”. While a few Mi-8Ts have been seen in Air Koryo livery (with modifications to the civil Mi-8TM configuration), the bulk of these were used to form two assault/transport helicopter regiments, with squadrons based at Pukch’ang-East AB, Kanch’on, Kowon, and Pakhon airfields. The unit at Pukch’ang-East was augmented with four Mi-26 “Halo” heavy-lift helicopters (reportedly from Belarus) in the mid-2000s.

In 1985-86, the KPAF received some 47 Mil Mi-24D “Hind-D” attack helicopters, establishing two regiments. One was stationed – along with some Mi-2 “gunship trainers” – at Pyongyang’s Mirim AB, but with attrition reducing the KPAF “Hind” inventory to only 20 machines by November 2000, this base was reported closed.

Also in 1985, North Korea circumvented U.S. export controls to indirectly purchase 102 US-manufactured Hughes 500D/Es, civilian versions of the US Army’s OH-6 “Cayuse” light observation helicopters. (Note 5) Modified to carry Soviet AT-3

Sagger anti-tank wire-guided missiles, the 87 Hughes helicopters that were delivered were used to establish a helicopter anti-tank gunship regiment – its base is unknown. The Hughes 500s (sometimes called MD 500 Defenders) were finally unveiled by the North Koreans during the Victory Parade held on 27 July 2013 in Pyongyang on the 60th anniversary of the end of the Korean War.

The Modern KPAF

The most modern combat aircraft in the KPAF inventory is the MiG-29 “Fulcrum”. This advanced fourth-generation multi-role fighter was sought as a counter/balance to the ROKAF’s acquisition of Lockheed-Martin F-16C/D Fighting Falcons. Initially 20 MiG-29 “Fulcrum-As” and four MiG-29UB “Fulcrum-B” two-seat combat trainers were ordered in a deal that included the purchase of a manufacturing license for the type. The first shipments arrived in May-June 1988 as semi-knocked-down kits and were assembled in the purpose-built factory at Panghyon, with the 24 fighters being completed by the end of the year. However, deliveries of further orders were halted by the Soviets due to non-payment. After the collapse of the Soviet Union, in the mid-1990s the DPRK later obtained six “fatback” MiG-29SE “Fulcrum-Cs”, probably from Belarus. The “Fulcrums” are reportedly assigned to the 57th AR based – with the other modern Russian combat aircraft, the Su-25 “Frogfoot” of the 55th AR – at Sunchŏn AB, about 50 miles (80km) north of Pyongyang and are responsible for the air defense of the North Korean capital.

In the nearly twenty years since acquiring the “Fulcrums”, the KPAF and the DPRK have changed little, despite the enormous transformation of the world around them. The shift from the bipolar standoff between Capitalist and Communist superpowers to a more or less economically organized arrangement of nations competing in global markets – where even the two most powerful Communist countries have embraced some form of capitalism – has left North Korea an increasingly irrelevant relic of a closed era in world history. Unable to acquire modern military hardware due to United Nations sanctions and pursuing ballistic missile-delivered nuclear weapons as the only means to give its current leader – the self-proclaimed “Great Successor” Kim Jong-Un, grandson of Kim Il-Sung (1912–1994) and

son of Kim Jong-Il (1941–2011) – any credibility to his rogue dialogue and puerile threats, the North Korean military – and especially its air force – has atrophied and its combat power, once substantial, has eroded badly, especially in the face of its South Korean brothers and their robust ROKAF.

The atrophy and erosion are best evidenced (at least through satellite photography) at the KPAF’s air bases, especially those that became famous during the Korean War. Uiju now appears to be only an open storage facility for Cold War-era Il-28/H-5 “Beagles” and MiG-21/F-7 “Fishbeds”. Sinuiju may host a unit of Mi-2 “gunships” but has otherwise faded from the KPAF order of battle. Pyongyang/Heijŏ, the KPAF’s original HQ and depot, has been redeveloped into a governmental residential area; Pyongyang/Mirim – which hosted KPAF radar units during the war and was since once the home a regiment of Mi-24D “Hind” assault helicopters until attrition forced that unit’s disbandment – is reportedly closed. In June 2013, the DPRK government announced that Wonsan AB would be turned over to civilian use (which, of course, is military controlled) with the resident MiG-21/F-7B unit (46th AR) moving to Kang Da Ri where the aircraft shelters are burrowed into the nearby mountain.

While little remains from the Korean War KPAF in its air bases, there lingers a legacy of its combat experience 65 years ago in its remaining units. The famous 56th Guards AR is the KPAF’s premier “Fishbed” unit, flying the most modern MiG-21bis model. The 57th AR – descendant of the Il-10-equipped attack regiment – is now equipped with “Fulcrum” fighters while the 55th AR (legacy of the KPAF’s initial regimental organization) flies “Frogfoot” ground attack aircraft, and the 58th AR (once the training regiment, then a MiG-15bis unit during the latter months of the conflict) is one of the KPAF’s two “Flogger” interceptor units.

Although this historical core remains, other units have disappeared or faded into insignificance. At one time the KPAF stationed its second-line fighters – MiG-17s, -19s and early-model -21s – along the DMZ (in the 3rd ACD), apparently more as a deterrent and “cannon fodder” for ROKAF/USAF F-15s and F-16s than for any militarily significant reason. But now it appears that one of the two (maybe both) MiG-17/F-5 “Fresco” regiments (4th AR) has been withdrawn from service and MiG-19/F-6 “Farmer” inactivity

(these units universally relegated to ground attack duties) indicates that these units are on the verge of extinction. The Vietnam War-era MiG-21/F-7 “Fishbed” units remain useful point-defense interceptors but the KPAF’s 55 MiG-23ML “Floggers” – the type had loss ratio of eight-to-zero against USAF F-15s in the 1991 Persian Gulf War and afterwards – are patently obsolete, especially when facing ROKAF’s 50 Boeing F-15K “Slam Eagles” (derivatives of the USAF’s F-15E Strike Eagle) and 180 their F-16C/D “Fighting Falcons”. Most significantly, currently KPAF pilots are reported to receive only 25 hours of flying time annually – more than 100 hours less each year than their ROKAF brothers.

Consequently, the core combat power of the KPAF now resides at Suich and Toksan ABs, homes for the four legacy regiments mentioned above. Whenever the DPRK joins the rest of the world as an open society, there will be created a unique and unprecedented opportunity for researchers to study the histories of these four units – from their inceptions to today – for through these units (plus the KPAF’s other, now disbanded, Korean War organizations) can be traced the intriguing saga of the world’s most secret air force.

Douglas Dildy (#844), USA.

Additional Sources

1. Gordon, Yefim, and Dmitriy Komissarov, *Soviet and Russian Military Aircraft in Asia*, (Manchester, UK: Hikoki Publications Ltd., 2014).

2. Morozov, Vladislav, and Sergey Uskov, “On Guard for

Peace and Labor: Observations on the DPRK Air Forces from 1948 to 1996”, translated by Stephen L. Sewell, *Mir Aviatsii*, February 1997.

3. Lavere, Rick, “Air Power Analysis: North Korea”, *Combat*

Aircraft Monthly, Vol 14, No. 6, June 2013.

4. Stonestreet, Robert, “International Incident over the Yellow Sea, Korea – February 5, 1955,” *Sabre Jet Classics quarterly*, Vol 3, No. 3, Fall 1995.

End Notes

1. Credited with the victories were Capt. George “Willie” Williams and 1st Lt Charles “Fish” Salmon.

2. As an additional, wartime function the 8th Training Aviation Division, HQ at Chongjin AB, was/is responsible for the air defence of the far northeastern sector.

3. Some 80 KPAF Il-28s and H-5s supposedly remain in KPAF service, but apparently most of them are in storage at Uiju, Changjin and Orang ABs. Reportedly some 13 Il-28R/HZ-5 reconnaissance-variant “Beagles” were operational in the early 2000s.

4. Only one Tu-154B remains in service, with the long-haul

mission now being fulfilled by two Tu-204 twin-turboprop medium-range airliners which have been modified (fuselage shortened but keeping the original wings and increased fuel tankage) to provide longer range, and a third one is on order.

5. The aircraft were sold by two Americans, Ronald H. and Monte Barry Semler, operating as “Associated Industries”, based in California, through Delta Avia Fluggerate GmbH Sales & Services, a West German firm that they controlled. In April, 1984, two Delta Avia employees (possibly the Semlers) went to Pyongyang, to assemble the two “demonstrators” and train North Korean mechanics and pilots, then

entered into an agreement to sell 100 more for nearly \$400,000 each. Between spring 1984 and January, 1985, seven shipments, totalling 85 helicopters and spare parts, sailed from Los Angeles-Long Beach harbour to Rotterdam, the Netherlands (supposedly destined for Nigeria), but there the crated helicopters were transhipped as “machinery” to Hong Kong and then were carried on Soviet merchant ships to North Korea. The Semler brothers were convicted of violating the U.S. Trading With the Enemy Act and were sentenced to a total of four years in prison.

Appendix Eight

KPAF Order of Battle – August 1953

Korean People's Air Forces Commander – General Van Len
KPAF Aviation Corps Commander – Major General Wang Yong

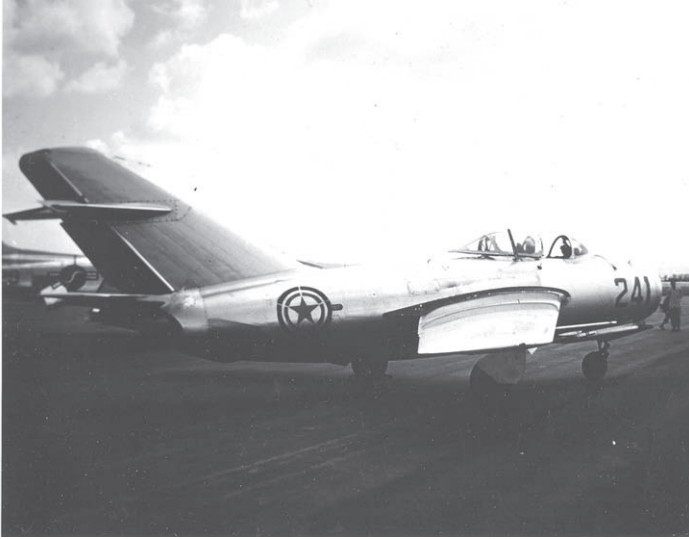
1 st Fighter Aviation Division – Colonel Kim Hi-Kiung	45 MiG-15bis	Kusong
2 nd Fighter Aviation Regiment – Maj. Chae San-Tae		
4 th Fighter Aviation Regiment – unknown		
2 nd Fighter Aviation Division – Colonel Hu Min-Kuk	45 MiG-15bis	Uiju
56 th Guards Fighter Aviation Regiment – HDPRK Maj. Kim Ji-Sang		
58 th Fighter Aviation Regiment – Maj. Shin Kang-Dong		
3 rd Fighter Aviation Division –	45 MiG-15bis	Unknown
Unknown Fighter Aviation Regiments		
8 th Bomber Aviation Division –	39 Il-28s	Heijo
24 th Bomber Aviation Regiment		
10 th Combined Aviation Division –		Sinuiju
1 st Fighter Aviation Regiment	18 La-9s	
57 th Assault Aviation Regiment	20 Il-10s	
3 rd Night Bomber Aviation Regiment – Colonel Pak Den-Sik	13 Tu-2s	Sariwon

Note: The 3rd Bomber Regiment, which conducted effective “night heckler” operations during the Korean War, had suffered heavy attrition during June 1953, leaving it with approximately 15 Yak-18As and five La-11s. Because the KPAF Tu-2s were observed conducting night bombing training in the PRC during the last year of the conflict, it is believed that once the cease fire went into effect the unit probably converted to these Tu-2s, or were joined by them, to provide a more robust and effective night bombing capability.

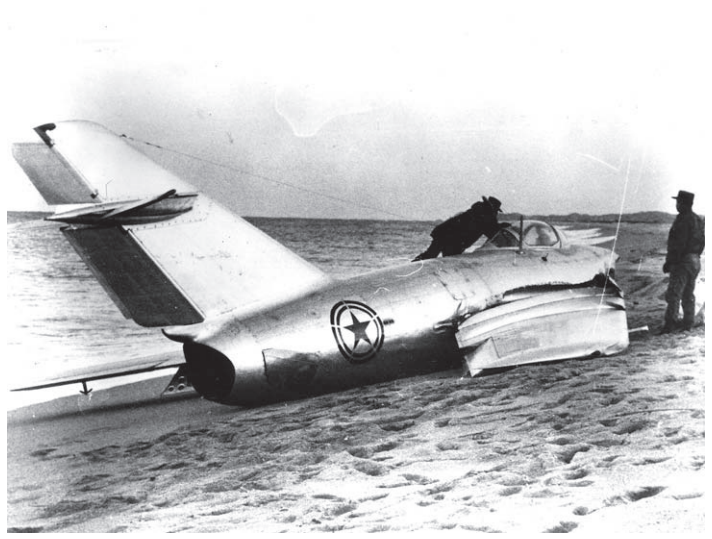
Source: CIA/USAF Intelligence Reports from 27 July through 21 August, 1953.



Snr Lt No Kum-Sok's MiG-15bis arrived at WPAFB and after being reassembled and having a “functional check flight” performed, it was publicly demonstrated on 24 February 1954. Afterwards it was flown by Captain H. E. “Tom” Collins and other test pilots of the AMC Flight Test Division to determine its precise flight envelope and was sent to Eglin AFB's “Air Proving Ground Command” for testing and evaluation of its 23mm and 37mm cannon. For tactics development, it was flown in “mock dogfights” against the F-86 Sabre and newer USAF fighters, as well as being flown by test pilots in training and exchange officers. While being flown by an RAF group captain, it was damaged in a landing accident in April 1956 and, due to its age and obsolescence, was not considered profitable to repair to flight status. At that time it was relegated to the USAF Museum at WPAFB, where it resides today. (Both photos from the Robert F. Dorr Collection)



No was on the first of several defectors bringing modern KPAF jet fighters to South Korea. The second was 23-year old Lt Chung Nak-Hiun, a recent graduate from the KPAF pilot and fighter training programs. He also landed his MiG-15bis at a Kimpo AB (note ROKAF F-86 in the background), on 2 August 1960. "Red 241" (note red rudder) was flown and evaluated by the ROKAF before it was reportedly scrapped. (Robert F. Dorr Collection)



The third MiG-15bis ("Red 239"; note red rudder) flown to South Korea was piloted by Maj Park Soon-Kok (aka Pak Sun-Kok) who crash landed his jet on a beach in the east coast province of Gangwon on 12 March 1970, damaging the nose and leading edge of the wing. Reportedly Park became a ROKAF pilot but died at age 43 due to alcohol-related problems. (Robert F. Dorr Collection)



Lt Chung Nak-Hiun being congratulated on his successful defection by the commander of Kimpo AB. (Tim Callaway Collection)



Apparently Park's "Red 239" was repaired, because a MiG-15bis with its "nose number" was later displayed for some time in a large weapons and equipment exhibit at the site of the original Seoul Airport (K-16) on Yoi-do Island in the Han River between Seoul and Yongdunpo (Kangnam), where it was photographed by Robert F. Dorr in January 1972. The aircraft has since been moved to the Hodam Air & Space Center (repainted as "Black 339" and with bogus KPAF markings) at Muan, in the southwest corner of ROK. (Robert F. Dorr Collection)

The LVA from August 1914 until June 1915

Frits Gerdessen

The LVA and the outbreak of World War One

The threat and the outbreak of World War One severely disturbed the development of the LVA. The delivery of the six Farman HF.22's contracted on 5/6 May 1914 was endangered. The production of these aircraft was supervised by ing. H.A. Vreeburg (Note 1). The first two, powered by 60 hp Gnome rotary engines, were flown in France in early July in presence of Lts. Van Heijst and Versteegh. They arrived at Soesterberg on 28 July, and were assembled at once (s/n M1 and LA6). LA6 received the 80 hp from LA2 that was under repair after a crash. (Note 2) The remaining four HF.22's had 80 hp Gnome. On 3 August, M1 and LA3 received new 80 hp Gnomes.

The outbreak of the war caused a hectic time in the LVA. At Soesterberg, the evacuation and destruction of the base was prepared and the LVA was to move to a field within Fortress Amsterdam. For this move, trucks and cars were contracted. In addition, the C.LVA, captain H. Walaardt Sacré, tried to obtain as much supplies as possible, especially fuel and (castor) oil. The construction of the new hangar was cancelled. However, the situation soon returned to normal. The LVA didn't need to move and construction of the hangar was restarted.

The C.LVA went to Den Haag for consultations and ing. H.A. Vreeburg was ordered to arrange further transport for the aircraft still on the way from France. On 29 July, he wired that he had accepted two Farmans at the Belgian border station at Erquilines (southwest of Charleroi) He was sent 3000 Francs to cover transport costs and to grease palms of customs officials. Vreeburg would take the small parts and engines with him as passenger goods.

On 1 August, Vreeburg wired that one plane, with spares, was in Antwerpen. The consul would arrange further transport and Vreeburg returned to Erquilines. The C.LVA ordered him to return to Soesterberg when Germany invaded Belgium on the 4th. The first Farman arrived in Holland on 2 August and was temporarily stored on a barge with a lot of spare parts Soldaat Warnaar was put on guard duty until relieved weeks later.

On 31 July, the C.LVA had sent Henri Wijnmalen to Belgium to collect aviation material. He was back in

Holland on 6 August, and on the 14th he was ordered to accept a plane at Roosendaal (a Dutch border station). This he did on the 16th. This plane soon arrived at Soesterberg, where it likely became LA7 and was issued to Lt. L.J. Roeper Bosch. The last two Farmans remained in France. These must have been those which were test flown at Buc the 29th July. On his arrival at Soesterberg, ing. Vreeburg became Head of the Technical Service.

In August another reserve officer with a flying license joined the LVA: 2nd Lt. P.M. van Wulfften Palthe (who studied medicine). Late July, five pupil pilots joined the LVA: Lts. A.K. Steup, G.A. Koppen, A.N.S.W.L. Coblijn (Note 3), M.L.J. Hofstee and LTZ A.S. Thomson.

In August 1914 Holland had 12 military aircraft in all: 2 Van Meels (LA1 and -5), 3 Farman HF.20 (LA2-4), 4 Farman HF.22 (LA6-8 and M1), 2 Brouckères (K1/2) and the V&L taxiing trainer (LA9). Two aircraft were in storage: LA8 and K2 (in a Colonial establishment in Amsterdam), one in repair (LA2) and one just arrived (LA7). The V&L must have been written off soon, as in 1915 the LVA took over the M1 with serial LA9.

The LVA patrols the borders

As the LVA prepared for evacuation and collected supplies, border patrols were started. On 1 August, Lt. F.A. van Heijst with observer Lt. M.L.J. Hofstee took off at 0630 hrs and went to Maastricht with landings at Venlo, and returned 1230. On the 3rd, LTZ H.G. van Steijn arrived with a Brouckère from Genk in Belgium. That day the OLZ ordered further border flights. The next day, Lt. W.C.J. Versteegh (observer Lt. A.K. Steup) and Lt. van Heijst (observer Lt. L.F.E. Coblijn) patrolled the German border between Zevenaar and Venlo.

The LVA received 16000 liters fuel on 3 August, and next day the C.LVA was informed that 6000 liters of fuel and a quantity of castor oil were reserved for him. He promptly asked for more and arranged to send fuel and oil to Venlo and Gilze Rijen. On 6 August, the C.LVA with Vreeburg went to the Artillerie Inrichtingen (Artillery works) at Amsterdam to discuss production of airscrews.

On 5 August, the C.LVA reported to OLZ Gen. C.J. Snijders where he was informed that recce flights were to be made over Zeeland. Lt. Versteegh informed him about a used landing ground near Vlissingen. At Venlo, where an airstrip was available, and Gilze Rijen fuel and oil were brought. The next patrol was flown to Venlo on the 7th by Van Heijst and Hofstee.

On the 9th, the C.LVA received order to post a Farman at Gilze-Rijen and make it available to the Field Army commander (CV), who had his HQ in 's-Hertogenbosch. On the 11th, Versteegh arrived there with his LA3. His crew chief was sgt. B.J. Boevink. He had a spare engine **and** the Motordienst (Note 4) **provided** ~~and~~ a truck. The LVA rented Van Meel's hangar for f 150 per month (Van Meel's dreams for an aircraft factory were now definitely over). On the 15th Versteegh was joined by Lt. Roeper Bosch with the LA7, but Roeper Bosch returned to Soesterberg on 3 September.

On the 12th, Versteegh flew a border patrol mission, and at least 6 more in August. He went as far as Venlo and Maastricht. Nothing of interest was observed, except for some fires in Belgium. During August and September, the German army moved west along the Dutch border. It is rumored that Versteegh flew into Belgium to check whether there were inundations around Antwerpen. His reports that there were no inundations were not accepted by Army HQ, where it was insisted there had to be and waited until this was confirmed by other sources.

Lt. Versteegh was kept very busy by the CV, to such an extent that the C.LVA asked to ~~be able to~~ restrict operations to save the equipment. By mid-March 1915, Versteegh had already flown 150 hours, and one of his Gnomes already had 210 hours of running time. That Versteegh had a spare Gnome was most likely because the journey Soesterberg-Gilze-Rijen took a lot of time, as rivers had to be crossed by ferries. This problem did not occur with the Kemperheide. Remarkably, a civilian, Bram Olthoff (Note 5), was engaged as administrator at Gilze-Rijen. In addition a former ENV mechanic, Anton (Toon) Burgers (Note 6) joined the detachment. Lt. Versteegh remained at Gilze-Rijen until he crashed his LA3 on 27 September 1915. He then returned to Soesterberg and was replaced by Lt. Roeper Bosch. The detachment was supported by the local army unit who provided guard personnel. The LVA personnel were usually

billeted in the hangar, but officers stayed a boardinghouse nearby.

Henri van Steijn had arrived at Soesterberg with a Brouckère recce plane from Belgium on 3 August - he had escaped from Belgium just as the plane was about to be confiscated by Belgian authorities. The other Brouckère, a trainer, had arrived by train some days earlier and was stored at the Colonial Establishment in Amsterdam. Van Steijn reported back for military duty and on 5 August was promoted to LTZ2 KMR (Note 7). On the 8th and 10th, he made test flights with the Brouckère, now serialled K1 (K for Koloniën). On the 14th, the OLZ asked and got permission from the Colonial Office to use the Brouckères in Holland. Van Steijn was ordered to select an airfield near Vlissingen and chose Souburg. There a tent was erected and on the 28th Van Steijn arrived with the K1. He made several flights in co-operation with the Navy. This came to an end on the night 12/13 September when the tent collapsed during a storm and destroyed K1's wings. Repair was impossible. The C.LVA ordered the other Brouckère (K2) to be brought to Soesterberg where it was fitted with the nacelle from K1. In the meantime Van Steijn returned to Genk to collect his possessions. A lot of which had been stolen.

On 30 August, Lt. Coblijn went to the Kemperheide (Note 8), a military training ground north of Arnhem, where a tent had been erected. He made several flights, but on 13 September he reported that his LA4 was so heavy due to rain that it could not be flown. On the 17th, the tent was blown over and the LA4 damaged. It had to be dismantled. It was soon decided to replace the tents at Vlissingen and the Kemperheide by wooden hangars. Once these were ready early 1915, the detachments were posted again.

Volunteers

On 1 August, Henri Bakker was ordered to report to the LVA as ensign pilot. He served at Soesterberg, but his Blériot was of little use. In December, he asked permission to fly his Blériot to Ede. Permission was given by the OLZ on 30 January 1915. He occasionally flew his Blériot there at least until 1917.

Van Meel also served some time as ensign pilot at Soesterberg. He did some flying training with Lt. van Heijst, but was not operational.

Aviation pioneer Frits Bahle, who had worked with the ENV at Gilze Rijen, volunteered as pilot, but was rejected. After some years, he was engaged as mechanic, but whether he ever worked at Soesterberg is unknown.

The first Dutch female pilot, Beatrix de Rijk, volunteered. She didn't stand a chance.

National markings and maintaining neutrality

The war made it necessary that the LVA aircraft carried a national marking, and on 5 August the OLZ prescribed an orange circle under the wings, adding that the LVA only use pusher biplanes with a nacelle for the crew. In fact, the orange circle, already used by Lt. van Heijst in 1913, was legalized. In addition, orders were given about shooting not to shoot—at aircraft.

The C.LVA started inquiries for aircraft armament, but it became clear that for the time being this was neither possible nor practical. The Farmans were totally unsuited for air combat and could thus not take armed action against foreign intruders. The only possible armament was pistols for the aircrew.

Flying training

The few aircraft available at Soesterberg were intensively used. Lt. van Heijst was the only instructor and he used Farmans and the Grote Van Meel. He started flying training with the newly arrived pupil pilots and gave Van Steijn, Van Wulfften Palthe, and Van Meel refresher training. On 5 November, five pilots made their solo flight: Lts. A. Coblijn, A.K. Steup, G.A. Koppen, and M.L.J. Hofstee, and LTZ A.S. Thomson. They qualified for their FAI license on 14-17 November. The 1st March the first officer for observer training was posted, res. 1st Lt. L.H. Daendels (cavalry).

Naval and Colonial aviation

With LTZ Thomson, some naval technical personnel arrived at Soesterberg. For the naval detachment a hangar was built which was later enlarged. Beginning in 1915, more naval officers and (later also) NCO's arrived for pilot training and the naval ground crew was accordingly increased. The naval detachment, which worked in close co-operation with the LVA, remained until in 1918 when the landplane base at De Kooij was ready. The detachment used the naval Farmans but also flew LVA aircraft.

A small number of Neth. East Indies officers was trained with the LVA and used one Farman, initially the HF.20 K3, and from 1916 the HF.22 K4. There was no colonial ground crew. It was initially hardly possible for the LVA to train NEI officers, for lack of instructors and aircraft. In addition the Colonial Office had to pay for the LVA's services and refund damages. The first colonial officer was capt. F. Darlang, who had already a Belgian FAI certificate.

Aircraft inventory

As a consequence of the war, Henri Wijnmalen, who had obtained a license from Farman, could not establish his planned aircraft factory in Soesterberg. He had government support, but with the condition that his factory be located behind the Waterlinie, the main defense line. He found working space on the top floor of the car factory "NV Industriële Maatschappij Trompenburg", the former Spijker automobile factory. In October, he started with 24 personnel (many Belgians). His works manager and designer was French-born Henri Alfred Vannehard. In 1915, the Wijnmalen combination took over the whole factory, and its name was changed to NV Nederlandsche Automobiel- en Vliegtuigenfabriek Trompenburg (NVT).

The C.LVA proposed to cancel the Farman contract and order the missing two aircraft from Trompenburg. The contract was signed on 31 December and the aircraft were delivered in June and July 1915. The LVA supplied two spare Gnomes. On 27 May 1915, seven more Farmans were ordered and on 13 October another four. Also the Navy ordered HF.22's. In 1916, the LVA assembled two from spares and parts from written-off aircraft.

Trompenburg in all built 17 HF.22, 11 for the LVA and 6 for the Navy.

On 11 April 1914, Henri van Steijn had offered his late brother's Farman HF.20 to the Colonial Office and it was accepted. The plane was at the Farman factory. When the war started, this Farman was considered "lost", but in December Farman asked what to do with this plane. Transport to Holland was quickly arranged and in 1915 the HF.20 arrived at Soesterberg and received serial K3. This plane was later exchanged with the LVA for an HF.22, which became K4.

The war prevented the Brouckères to be shipped to the East. The War Ministry (MvO) and Colonial Office (MvK) decided that the LVA should take over these

aircraft. This was arranged early in 1915, but as K1 had been written off and K2 was deemed unusable, only two 80 hp Gnomes were taken over. The Colonial Deperdussin in the meantime had been scrapped.

On 5 June 1915, Trompenburg delivered its first HF.22, LA10. By that time the LVA possessed only eight Farmans, of which only five were operational. Both Van Meel aircraft had been withdrawn because of lack of engines despite that the LVA had bought a 50 hp Gnome from Heinrich van der Burg. Leo van Steijn's HF.20 was used with serial K3. The V&L monoplane was also withdrawn and its serial LA9 given to the naval HF.22 M1, which was taken over by the LVA after a crash. The LA6, LA7, and LA9 were in repair. LA3 and LA4 were at respectively Gilze-Rijen and the Kemperheide. The remaining Farmans (LA2, LA8, and K3) were used for training. Several cross-country flights were made by the pilots to qualify for their MB. Until June 1915, there is no mentioning of flying for the army from Soesterberg.

Engines

It is not clear whether and how many spare Gnome rotaries were bought with the Farmans. Late in 1916, the C.LVA reported he had received 30 Gnomes, but whether the number is correct is in doubt. There may have been a few more.

To power the Farmans produced by Trompenburg, eleven 80 hp Gnomes were ordered from France early in 1915. They were received in August/September. Res.lt. Labouchère was sent to France to accept them. He was posted at the Embassy and ordered to obtain as much information about French aviation and aircraft as possible, and to check on the possibilities of obtaining aircraft and equipment etc. Before the 11 Gnomes arrived 16 more were ordered, but only 8 arrived in March 1916. The purchase of Gnomes was essential for Farman production.

Detachments

Early in 1915, hangars were built at Vlissingen and the Kemperheide. The hangar at Vlissingen was ready in January and LTZ van Steijn arrived there on the 19th with Brouckère K2. The condition of the field was such that he nearly crashed on landing. Thus Van Steijn asked the local garrison commander to improve the field, and that was ready on 7 February. In the meantime, with his five-man ground crew, the hangar

was made ready and tools were acquired. He also had to salvage foreign aircraft.

On 10 February, Van Steijn made a test flight but fog forced him to land after five minutes. His next and last flight was on 23 February, 15 minutes. Now it was clear that the K2 was unsuitable as a recce plane and it was discarded.

Van Steijn remained at Vlissingen until March, and salvaged more foreign aircraft. Farman K3 was earmarked in case a plane was to be detached to Vlissingen.

The Kemperheide was taken in use again on 22 February 1915 when Lt. L.F.E. Coblijn and his hangar chief sld. W. Warnaar arrived with the LA4, which had been repaired. The ground staff came with three trucks. They came unexpected but the firing range warden had seen their arrival and brought the hangar keys. Once the trucks had been offloaded Lt. Coblijn went to Arnhem to report to the IInd Division Staff and to collect beds, furniture etc. The men had their first meal in a nearby café (with daughters....).

The next morning, the men were wakened by a group of soldiers who were charged with guard duties. The commanding sergeant asked cpl. Preusser "who was in charge" and Preusser pointed to sld. Warnaar. The sergeant had a fit - a soldier superior to a corporal! But soon Lt. Coblijn arrived and put matters right. Yet the sergeant had no understanding at all for the situation and remained irritating. He was soon replaced, ~~also by~~ much to the relief of his own group.

Now two soldiers stood on guard and the others often assisted in the hangar. A telephone was installed in April.

There was much interest in the detachment. Visitors frequently offered tips, but the men could not accept them. Lt. Coblijn overcame the problem by setting up a tip-bowl and weekly distributed the proceeds among his men. That was a very welcome addition to their weekly pay of f 3.85. The truck drivers, who were under contract for f 21 a week, did not share.

Lt. Coblijn was kept quite busy by the IInd Division. Warnaar, promoted to corporal, often acted as observer and was present when instructions were given. When he took off his flying gear many officers misunderstood the presence of a mere corporal, but Lt. Coblijn prevented Warnaar from being chased away. Coblijn also remarked that Warnaar would fly with him since the others didn't dare to fly. Lt. Coblijn and

his personnel were relieved by Lt. Koppen on 2 August. Back at Soesterberg, Warnaar returned to his job as hangar chief.

After Lts. Versteegh and Coblijn returned to Soesterberg, pilots were posted in the detachments for ca. 2 months. Their observers were posted for 1 to 2 months. The observers were often fresh pupil pilots, and the assignment as observers was to give them a taste of the flying service. Once the observer training started in October 1915, “real” observers became available. Later on, often observers on 4-weeks refresher training were posted. Also the ground crew was regularly relieved.

(Re-)organization

Early in 1915, the LVA was reorganized. In March the unit became an independent corps within the army, with personnel of its own and detached personnel. The LVA got its own uniform (infantry staff) with a collar badge: a golden rotary engine with a propeller. The other ranks soon found out that this attracted girls and they made ample use of it - according to Warnaar’s memories. (Note 9) Most important were payment arrangements. The C.LVA went as far as possible to obtain advantages for his unit and men.

On 30 March, the MoW issued a personnel table for the LVA:

captain, C.O.	1
officer pilots	12
incl. 2 instructors and reserve officers.	
Ingenieur	1
civilian	
Quartermaster	1
W/O or SMA (sgt.major administration)	
Storekeeper	1
W/O, SM or sgt.	
Clerk	1
W/O, SM or sgt.	
Technical personnel	39
sgts. and cpls.	
Sgt.major	1
or sgt	
Cpls and privates	16
technical personnel. Detached	
volunteers preferred, otherwise conscripts.	
Medic	1

Thus, the LVA consisted of 13 officers, one civilian, and 66 NCO’s and other ranks, 80 in all. In

addition, officer pupil pilots could be posted, but these remained with their army units. Officers had the right, but were not obliged, to have their horses with them. The LVA already had more personnel than provided for by the plan. By the of 1913, there were 33 men (incl. 5 officers); and by the end 1914 there were 94 (incl. 17 officers and one civilian).

The C.LVA received instructions which included that he was directly under the CGS, had to keep his unit up to date, study aviation, make proposals and reports, etc. In case of mobilization, for each two aircraft three crews (pilot and observer) had to be available.

Foreign aircraft interned in Holland

A number of ships and aircraft were interned with their crews. With landplanes it was always clear, but not at sea. Aircraft and ships apprehended within the territorial waters were usually interned. However, aircraft in distress were often found on the North Sea. Many of these aircraft were already damaged or sunk. The rescued crews were set free.

Foreign aircraft after landing in Holland were guarded by the local military. Often civilians, among them local policemen, were first on the scene and could cause damage. The OLZ and the LVA were at once informed. The local military commander made up a report. The crew were apprehended and after interrogation and registration brought to the appropriate internment camp. Wounded crew received first aid and, when necessary, were hospitalized.

During the war the Dutch government purchased a number of interned aircraft, which had arrived in good condition. A number were used without being bought.

The interned aircraft became very important in the LVA. They were usually quite modern, though there were many one-offs. A number was bought. After some years, half the LVA inventory was interned aircraft.

In case an interned aircraft was in good condition (or easily repairable) the C.LVA submitted a proposal to the OLZ to buy it, with an estimated price. The OLZ would pass this to the MoW, who passed it on to the Foreign Ministry. They informed the Dutch embassy abroad who made a deal with the foreign authorities. The embassy reported back, and when the plane had

been paid for, the OLZ informed the C.LVA that it was now Dutch property. In the meantime, the plane had been repaired and test flown and could already be in use, even having crashed and been written off.

The aircraft were paid for in cash (via a bank), but the cost could also be settled with money from the internment costs. Up to mid-1917 usable interned aircraft were bought. Thereafter, most were just impressed.

Once LTZ Van Steijn had returned from Vlissingen, internment teams were sent to salvage aircraft. These were commanded by an officer, but the technical responsibility was with the senior mechanic - in the first years usually sgt. B.J. Boevink. The team had one or more trucks. The aircraft, usually unknown types, were cautiously dismantled. Fuel and oil, both in short supply, were carefully tapped. Armament and equipment were thoroughly studied. Often the aircraft had landed on a ploughed field or meadow, and it was quite a job to haul it to a road, usually with the help of a local farmer with his cart and horses. Transport to Soesterberg could be by truck (e.g. a Sopwith Pup), or partly by train or barge. The teams billeted in boarding houses and hotels and had their favorite pubs on the route to Zeeland, where most internees arrived. Once at Soesterberg the plane was re-assembled and repaired. Often parts had to be made. LVA mechanics became very experienced.

Not all interned aircraft were usable. In many cases the internment team just collected the (burned) remains. Sometimes the engines could be salvaged (this was also the case with several seaplanes, salvaged by the Navy).

Interned aircraft attracted much public interest, including photographers, and many interned aircraft appeared on privately produced postcards. In Zeeland, one official photographer was contracted by the OLZ. C.L. Dert from Vlissingen often worked for the Navy. He was immediately informed about an aircraft landing and set off by bike, with a 13x18 cm reflex camera, a tripod, and a quantity of glass plates, thus a very heavy load. Usually the muscular Dert had to cycle over cobbled or unpaved and muddy roads, ending up in a muddy ploughed field, in all weather.

The interning of aircraft started on the first day of the war. On 4 August, the 1st Escadrille of the Belgian

Compagnie des Aviateurs at Brasschaet near Antwerpen moved to Ans near Luik with three of its Farman HF.20's. HF.20 #22 flew along the Dutch border, had technical trouble and landed on the Dutch side of the border river Maas at Roosteren. The HF.20 was badly damaged. Lts. Albert Schmitt and Albert de Bueger were duly apprehended, but released next day, with their (wrecked) plane.

On 14 August, Friedrichshafen FF 19 seaplane #28 beached at Schiermonnikoog. The plane was later acquired for the Navy and the crew, Oberleutnant zur See Hubert Waldemar Klein and Fähnrich zur See Carl Georg Philipp. was interned at Bergen:

On 20 August, due to engine trouble, Lt. Hans Hesse of Feld Flieger Abteilung 12 landed at Oostburg with Albatros Taube A29/13. He landed amidst Dutch troops. The (unusable) plane was locally stored and transported off in 1915. Hesse went to Bergen. He reported that German commanders initially did not trust observer's reports, but gradually became aware that aerial observations might after all be useful. He also told that the German pilots were under strict orders to avoid Dutch territory, but that was difficult as they were short of maps.

On 13 October, the French Farman MF.7 #120 landed at Biervliet with Lts. Maurice Happe (French) and Baron Raoul de Cartier (Belgian). They had departed from Ostende and went as far as Luik, but on return got in bad weather. The crew presented themselves as Farman employees on a test flight. With Dutch help the plane was dismantled and transported to Vlissingen, from where it was shipped with the ferry to Folkestone, with the crew.

On 14 December 1914, Fl.Lt. T.A. Rainey landed with Farman Shorthorn #1240, also unusable.

Thus in 1914, four landplanes came in of which two were released. In addition, a Short seaplane was brought in December, of which only the engine was usable.

In 1915, the internings continued, and now several modern and usable planes arrived. Up to 1 June, six were interned of which five were eventually taken into use. Most were salvaged by LTZ van Steijn with his men at Vlissingen.

Frits Gerdessen (SAFCH #12), the Netherlands

Appendix.1

Early Dutch Aviation Engineers

H.A. Vreeburg, 16 April 1889/1 Sept. 1973.

Vreeburg went to France to study aviation and in July 1912 graduated from the École Supérieure d'Aéronautique in Paris. Thereafter he went to the flying school of the Société des Appareils d'Aviation Doutre. In April 1913 Vreeburg qualified on a Doutre plane (Doutre built modified Maurice Farman biplanes) and received the French license #1315 (2nd May 1913). He worked with Doutre and met captain Walaardt Sacré at the Paris Salon (26th October-10th November 1912). Later he joined Bréguet.

In 1913 Vreeburg was asked to supervise the production of the first 3 Farmans for the LVA. Next year he was asked again and appointed as “ingénieur-contrôleur du gouvernement hollandais” to supervise the production of the next 6 Farmans.

The first two Farmans reached Holland without problems. Vreeburg managed to get the next 2 through Belgium in August, and was also ordered by capt. Walaardt Sacré to come to Soesterberg. There he became Head of the Technical Service.

In 1917 he designed the Vreeburg A2M bomber, which was a twin-engined 3-seat conversion of a written-off

(interned) Sopwith 1½Strutter. The plane was briefly flown early 1919.

In 1919 Vreeburg joined the Aviation Service of the NEI Army as Head Technical Service, and ended up in jap camps in WW2. After the war he returned to Holland.

J. Schiere

Vreeburg was the second Dutchman to graduate from the École Supérieure d'Aéronautique. The first was Jan Schiere, who graduated late 1910. Schiere returned to Holland and was active in the Aero Club and the Aircraft Model Club in Den Haag. He was very critical about the purchase of Brouckère aircraft for NEI and Leon de Brouckère filed a lawsuit unto him. This ended without compensation.

Schiere went to England and started Ebor Propeller Company Ltd, which produced (masses of) wooden propellers for British aircraft. After WW1 the firm had to be closed and moved to Holland, where it still exists, as a trading company.

Appendix 2

Inventors

The C.LVA was often approached (or plagued) by “inventors”. A remarkable one was J. Bikbergen. Bikbergen said he had developed a very advanced monoplane that could land vertically with a parachute and offered this to the OLZ in July 1915. However, the plane was so secret that Bikbergen did not allow LVA personnel at the tests. The C.LVA became suspicious. On 3 August 1915, Dutch newspapers reported (subject to reservation) that Bikbergen had crashed at Maarsbergen, ca. 12 km SE of Soesterberg,

and was badly wounded. The next day, the C.LVA started a search, but no wreck was found and nobody had observed the crash. Bikbergen had also said he had performed tests at the Kemperheide – but at the stated time, the LVA detachment was already there. The LVA personnel, among them the very attentive Willem Warnaar, had never observed something unusual and neither had the training infantry. The C.LVA reported to the OLZ that he considered Bikbergen a charlatan.

Notes

1. Vreeburg received French license #1315 on 2 May 1913. He was .a Dutch aviation engineer graduate working in France who had also supervised the production of the 3 HF.20's delivered to Holland in 1913.

2. The crash took place on the 20th July 1914 at Oosterbeek. The crew were Lt. van Heijst and cpl. van der Drift.

3. 1st Lt. A. Coblijn was a highranking horseman (hussar) and the elder brother of L.F.E. Coblijn. He was nicknamed “Grote Co” (Big Co) and his brother “Kleine Co”(Little Co). They were also referred to as Coblijn Sr. and Jr. Both were born in Paris and returned to France in the twenties.

4. Automobile Corps.

5. Bram is short for Abraham.

6. Toon Burgers remained at Gilze-Rijen until 1940 as local mechanic to serve LVA aircraft passing by. In 1939 he and his colleague Harry de Zwart were incorporated in the IIIrd Recce Group.

7. Koninklijke Marine Reserve = Royal Navy Reserve.

8. Presently part of Deelen airbase.

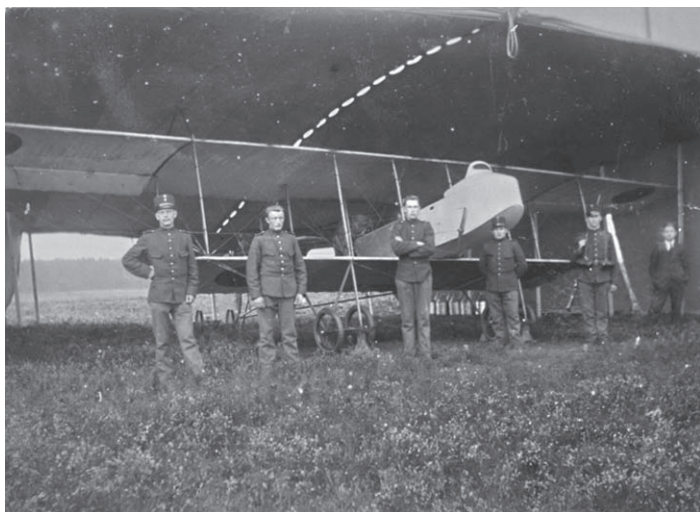
9. Willem Warnaar (1893-1975) has written a long and lively account of his service and adventures until WW2. He trained as a pilot in 1919 and later became a navigation expert. In May 1940 he was the oldest operational pilot. He retired as W/O after WW2.



The C.LVA with his officers, September 1914.



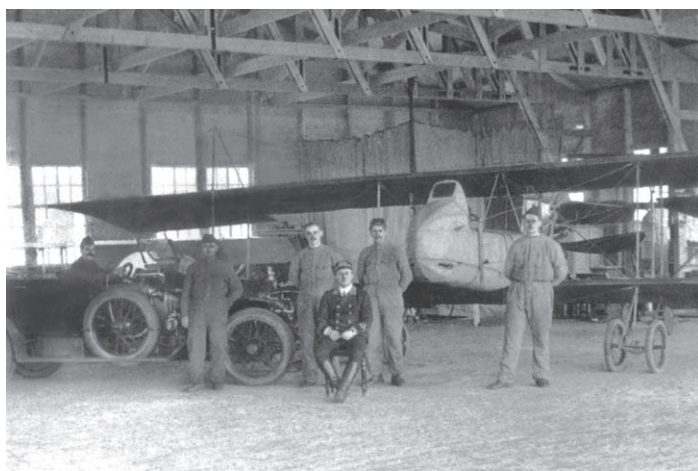
Brouckère K1 at Vlissingen. The plane arrived on 28 August 1914 and this photo (postcard) was mailed on 31 August. (WB)



Farman HF.20 LA4 in the tent at the Kemperheide, 4 September 1914.



Farman HF.22 LA7



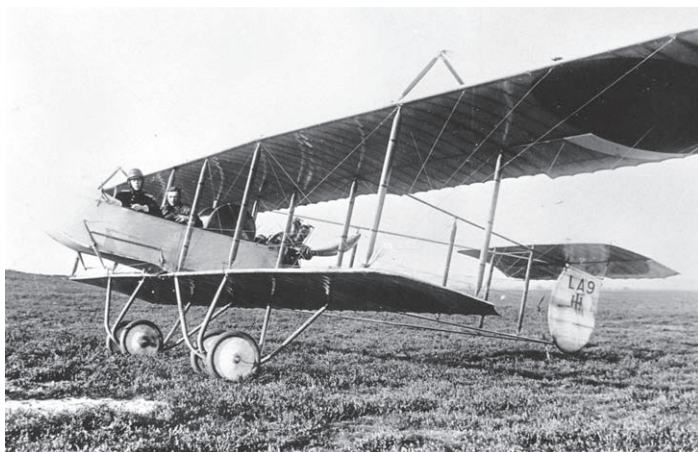
Brouckère K2 in the hangar at Vlissingen, Jan-Feb. 1915. K2's original fuselage has been replaced by that of the wrecked K1. LTZ H.G. van Steijn (seated) with his ground crew.



The LVA detachment at Gilze Rijen with its truck. Second from the left is hangar chief sgt. B.J. Boevink and seated is administrator Bram Olthoff. Pilot Lt. Versteegh is not in the picture.



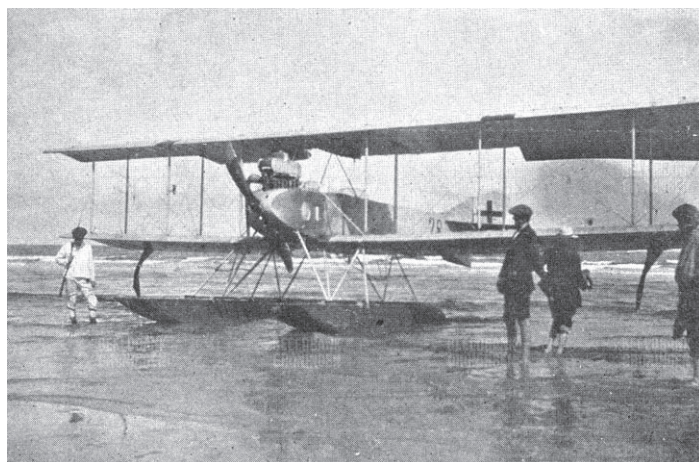
Captain F. Darlang with the Colonial Farman HF.20 K3. K3 has no engine here. Darlang has on his collar the 3 stars for a captain and the LVA emblem, a rotary engine and propeller.



Farman HF.22 LA9, originally the naval M1. Lt. Koppen in front.



Bram Olthoff mailed this postcard on 9 April 1915. Apparently, Lt. Versteegh gave him a ride in LA3. (WB)



The first interned seaplane, Friedrichshafen FF 19 #28. Both crew members later escaped from internment.



This Short seaplane, either 813 or 817, was picked out of the sea off IJmuiden on 4 March 1915. Two Short seaplanes were lost on 16 February after they attack at Zeebrugge. The pilots of both planes were never found.



OLZ General C.J. Snijders. He carries the marshal staves behind the four stars. Snijders was an engineers officer and is thus prominent in the Geniemuseum.



12 Generaal-majoor M. Onnen (genie), here with his staff, from early 1915, commanded the Bureau Interneering, which handled all aspects of internment. Gen. Onnen had retired before

the war, but came back in active service, initially as the garrison commander of Rotterdam.



The first real landplane interned was Albatros Taube A29/13, flown by Lt. Hans Hesse, on 20 August 1914. Hesse escaped from internment in 1915 and later had an interesting career in (German) aviation.



The old Fortress Wierickerschans, in the centre of the province Zuid-Holland. In 1915-1917 it was used to accommodate officers who could or would not promise to escape.. French officers were not offered parole. British and German officers were initially denied parole. Like Colditz in WW2, successful escapes were often made.

All photos from the author's collection, except those marked "WB" which are from postcards collected by Wim Boomgaard.

Exotic Birds 4

Greg Zozak



Aum Shinrikyo Mi-17. The Japanese Aum Shinrikyo cult became infamous for its March 20, 1995 attack on five trains in the Tokyo subway system, in which they released an impure form of the toxin sarin. They obtained one Mi-17 from Russia. Note the Aum Shinrikyo symbol on the rear of the fuselage. Image from unknown internet source.



Guinea Bissau C-47. Guinea Bissau was one of a legion of countries whose armed forces used the C-47. This example sports the national flag on the fin, instead of the black star on a red disk normally used on military aircraft. Note the registration code with the Guinea Bissau CR- international country prefix. Image from unknown internet source.



Canadian CC-106 Yukon. Canada manufactured the Bristol Britannia under license. The RCAF used it under the designation CC-106 Yukon as a transport aircraft, from 1957-1982. The Yukon in this image sports the red-white-red roundel used by the RCAF in 1967, to celebrate Canada's 100th birthday year. It was employed only on VIP and personnel transport aircraft such as the Canadair Yukon and the CC-109 Cosmopolitan. Image from www.winnipegacc.org



Guyana U-10A. Guyanese military aircraft feature variants of the national flag as markings, as well as the Guyana Defence Force badge. This badge is shown on the fuselage of this U-10A, which is also finished in the black-yellow-white color scheme common to Guyana Defence Force aircraft. Though it is reported that Guyana Defence Force aircraft use a black-yellow-black roundel, there is no photographic evidence of this. Image from unknown internet source.



Jordan Special Forces An-32. Jordan's Special Forces utilize a number of aircraft, including the An-32. Special Forces aircraft are marked with Jordanian air force roundels and fin flashes, as well as with the Jordanian Special Forces badge, which is shown on the fuselage of this An-32 that is obviously under maintenance in a country other than Jordan! Image from unknown internet source.



Lesotho Do-28. The Dornier Do-28A is the original version of the Do-28, and was used by the Lesotho Police Mobile Unit, among other operators, including Angola, Israel, and West Germany. This one, in an overall black color scheme, is marked with the old Lesotho flag on the fin. Image from worldmilitaryintel.blogspot.com.



Sierra Leone Partenavia AP-68TP. The Partenavia P.68 is an Italian six-seat, twin-engine, high-wing monoplane built by Partenavia and later Vulcanair, and used as a training and transport aircraft. This rarely seen example from the Sierra Leone air force is shown in an interesting medium blue-gray and light blue-gray color scheme, with a tiny air force roundel on its fin. Image from www.airliners.net, via Thomas Brügge.



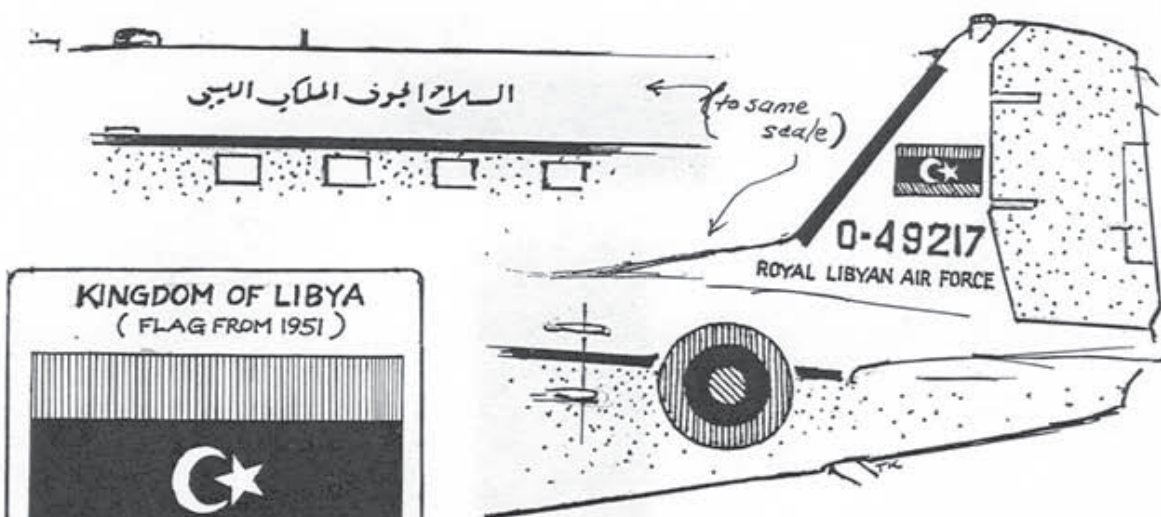
Singapore Javelin. The RAF turned over several aircraft to the Singapore air force upon its inception, to be used as instructional airframes. Among these were a Gloster Meteor, a Bristol Belvedere helicopter, and this Gloster Javelin. Note the early Singapore air force roundels of red-white-red, as well as the similarly colored fin flash. These markings were the former RAF insignia with their blue components painted over in red. Of interest also is the SAF-TECH8 aircraft designator on the fuselage. Image from unknown internet source.

UNFINISHED PROJECTS FILE

TAILS of the GOONEY-BIRD (12)

OVER AFRICA:

LIBYA



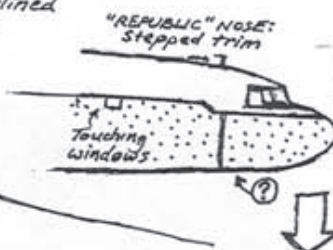
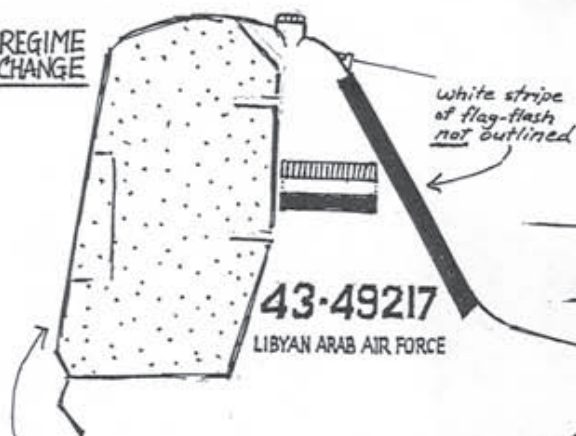
[ANOTHER C-47 [0-49015] SEEMINGLY HAS BOTH ROYAL TITLES IN A LIGHTER COLOR. (Painted over?)]



Red
Black
Green

1951-1969

REGIME
CHANGE



ALSO
NEW FLAG

Red
White
Black

1969-1977

Rudder painted
aluminum or a
darker color?
[B&W PHOTO
VERY DARK]

Fuselage trim-stripe breaks around
insigne & hor. tailplane (on both).

1977 ON, SOLID
GREEN DISC

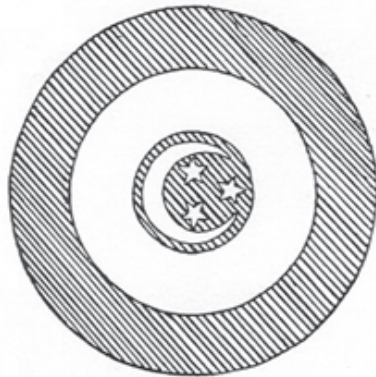
T. KOPPEL/SAFO

UNFINISHED PROJECTS FILE

TAILS of the GOONEY-BIRD (13)

OVER AFRICA:

EGYPT



1945 - 1958
(GREEN & WHITE)

Camouflage (in 1955):
olive-green
and tan

Arabic "816"

No black

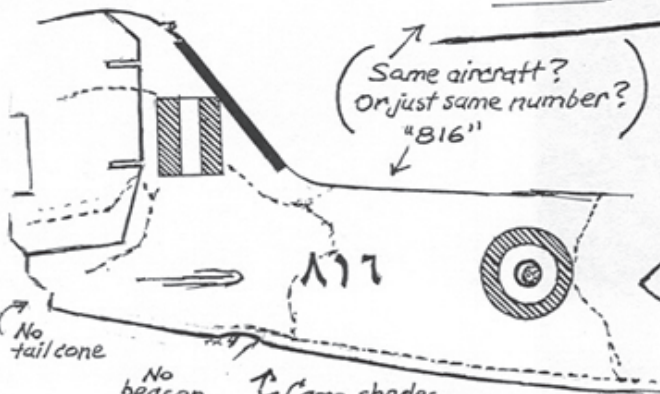
816

Λ17

Light blue
undersurfaces

Tail cone

(Same aircraft?
Or just same number?
"816")



No tail cone

No beacon

Cam. shades
different?

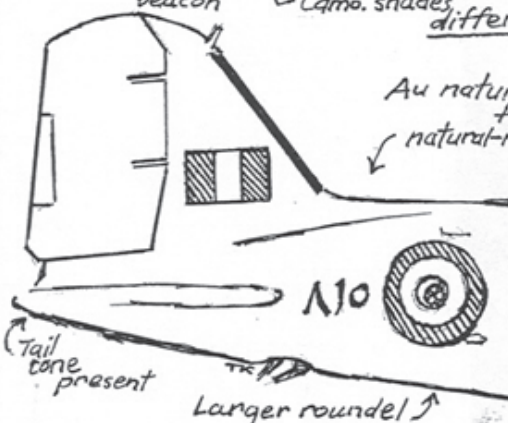
As nature:
these two in
natural-metal overall (?)

Arabic
"815"

Arabic
"819"

AFTER 1958,
ROUNDELS
RED, WHITE
AND BLACK

Thin beacon



Tail cone present

Larger roundel



Λ19

No tail cone

NOTE THREE VARIATIONS
IN PROPORTIONS AND THE
PLACEMENT OF THE FIN-FLASH.

T. KOPPEL/SAFO

MAURITANIA-I



AS BELOW
(YELLOW
ON GREEN)



Other versions as illust. elsewhere



National
flag
variations
↓

BLACK

48032

C-47A
"5T-MAC"

WHITE TOP
(NO TRIM LINE)
LOWER

[1967]

48032

ROUNDEL OVERLAPS BLACK AREA
ON BOTH SIDES

Lower
rear fus.
BLACK

No black
strip
(de-icer)

[1970s]

93715

C-47A
"5T-MAF"

WHITE TOP
(NO TRIM LINE)
HIGHER

[1965]

Rudder flag
different in detail
and positioning

Black anti-glare

(No prop warning stripe)

Wing roundel

Black de-icer

MORE-ITANIA

T. KOPPEL/SAFO

UNFINISHED PROJECTS FILE

TAILS of the GOONEY-BIRD (15)

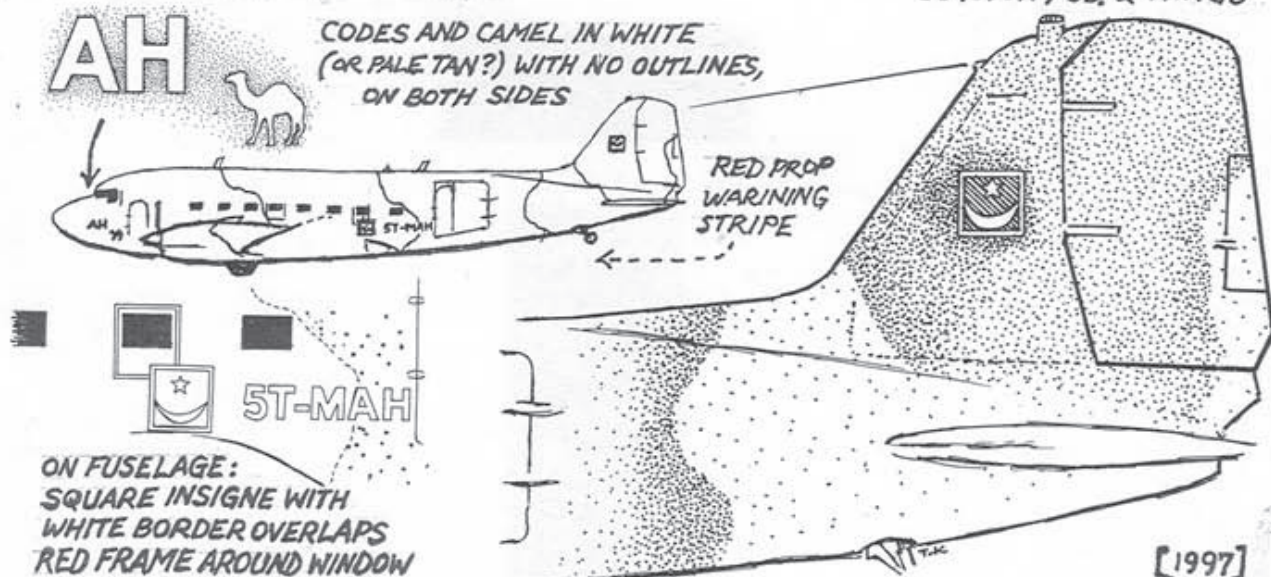
OVER AFRICA:

MAURITANIA-II

GOONIES: *The Next Generation*

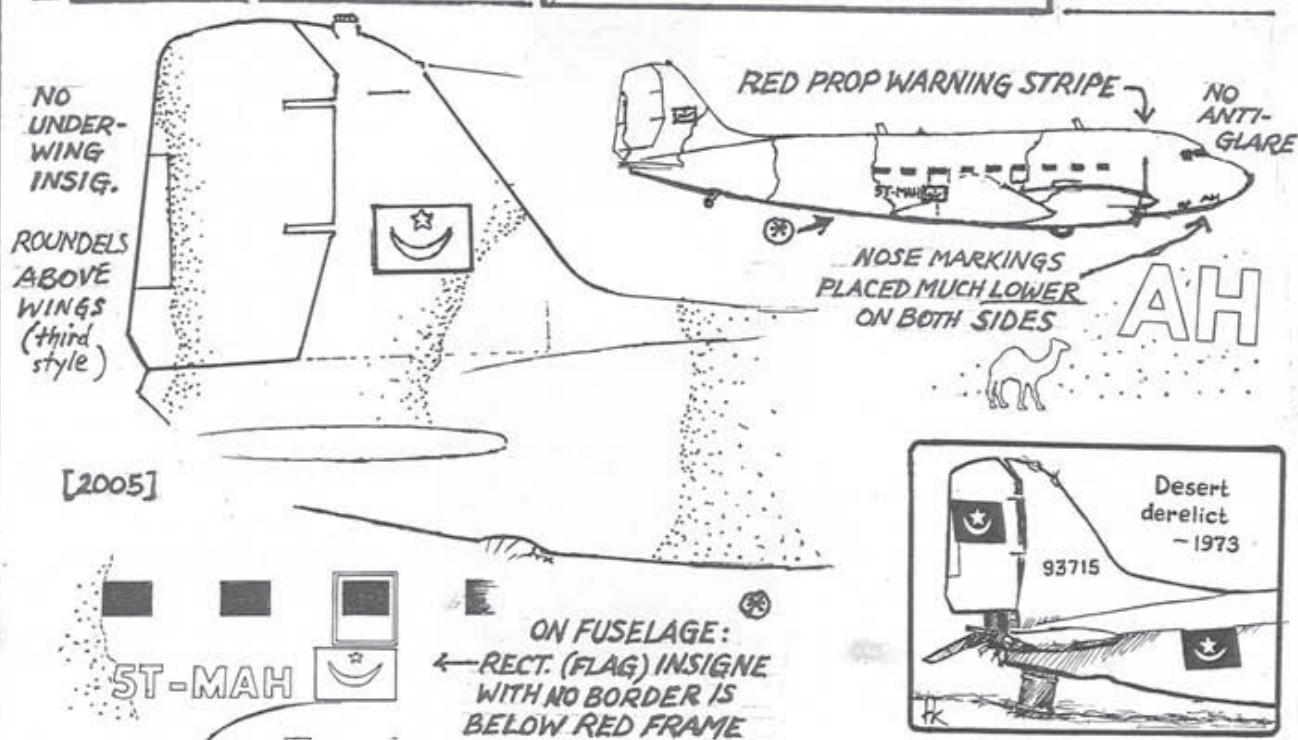
TURBO-TAIL (C-47 → BT-67)

WRAPAROUND DESERT
CAMO. ON FUS. & WINGS



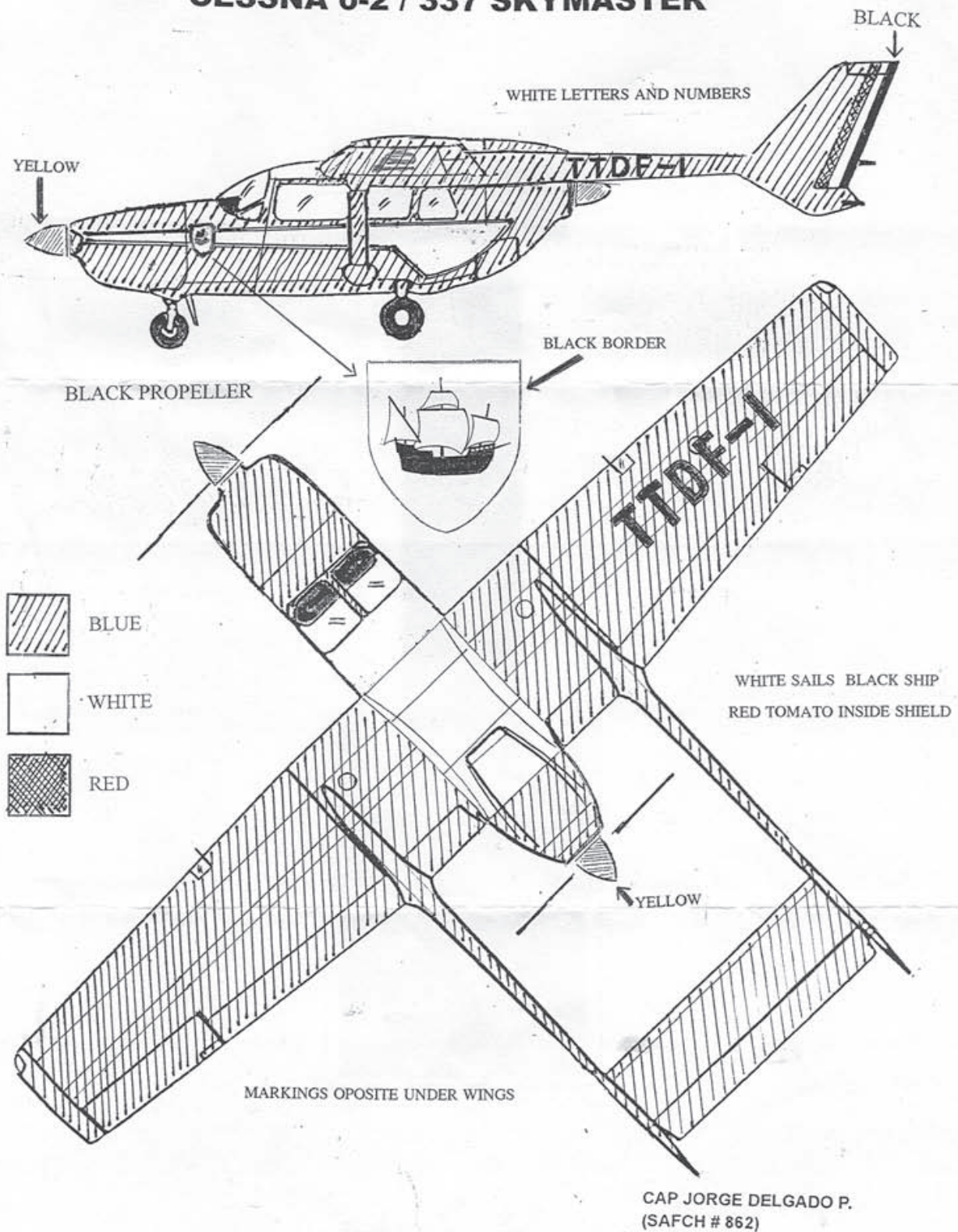
"ST-MAH"

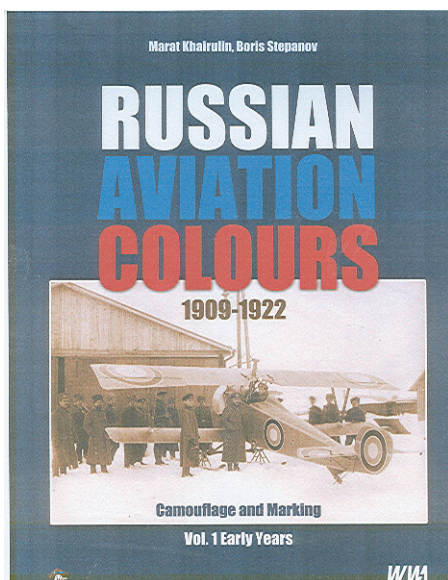
AFTER OVERHAUL AND REPAINT



TRINIDAD AND TOBAGO DEFENCE FORCES

CESSNA 0-2 / 337 SKYMASTER





Russian Aviation Colours 1909-1922, Vol. 1 Early Years, by Marat Khairulin and Boris Stepanov. 176 pages 12 inches by 8.5 inches (300 mm x 220 mm). Hardback. MMP Books/Stratus. £40.00

This is the first of a four volume set originally published in Russia and now, thankfully, translated into English by MMP. We mostly think of Russian airpower in terms of the massed air fleets of World War 2 and the Cold War, however like all mighty oaks Russian air power grew from a few acorns and this first volume describes that initial burgeoning.

The 'Acknowledgements' are unique in that not one reference is made to a Western source. The primary sources being various State Archives, and the collections and contributions of many individuals. So don't expect 'the usual suspects'.

The first section, 'Dream of Wings' deals with the historical and artistic background to Russian flight, which was, as ever in these cases, stimulated into life by the arrival of the Wright brothers in France. The profound effect of this was felt not only by the aviation pioneers but the artistic establishment and the *avant garde*.

Chapter 1 of the book proper deals with the setting up of the All-Russian Flying Club in 1908 and the establishment thereafter of clubs with Royal Approval throughout Russia. Many of the early aircraft are illustrated in photograph and drawings together with

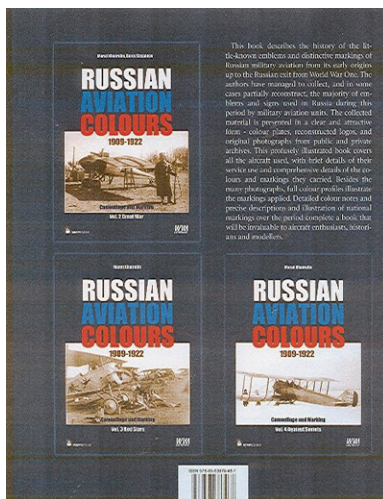
the club insignia etc.

Chapter 2 'On the Eve of the Great War' takes us into the development of military flying from 1911-1914, again well illustrated with many unusual markings, and goes through all the early units including some lighter-than-air craft.

Chapter 3 examines the various emblems and National Markings carried. This takes up some 50% of the book and diversifies into various other markings encountered - German, Austro Hungarian, Turkish, and Romanian - and the influence of French and British markings.

As I have stated, throughout the book there are dozens, to me anyway, of totally new photographs. The artwork is excellent being of a delicate and subtle nature suited to these early warplanes. Various documents are reproduced - if you read Russian it would be handy here! My only slight caveat is that the translator had not quite caught the differences of Russian and English idiom making the language slightly stilted, but it's the only game in town folks. Just think Russian.

Personally, I can hardly wait for the rest of this series and I might even be tempted to go out and buy a model of a French airplane. Most of the Russian inventory of this time was French. Malcolm Barratt (#1716), UK.



[Editor's note: The three subsequent volumes are: Vol. 2: The Great War. Vol. 3 Red Stars; and Vol. 4: Against Soviets. Vol. 4 will be of interest to the modeler.



Finnish Fighter Colours 1939-1945 Volume 2, by Kari Stenman & Karolina Holda. 205 pages 200 mm by 300 mm (8.5 inches by 12 inches). MMP/Stratus. £35.00.

Those who read these reviews will recall that when I reviewed Volume 1 in this series I said that readers would have to wait for coverage of the Bf 109G in Finnish service. Well wait no longer as MMP have provided sufficient information and illustrations to keep you more than happy.

There are twenty nine side views with representative top views. As with all previous volumes in this excellent series, the book has been divided alphabetically and each aircraft is treated to a brief history of the type in service and the usual excellent artwork.

Eleven aircraft are covered: Hurricane, Caudron-Renault CR714, Curtiss Hawk 75A, Bf 109G, Myrsky, Polikarpov I-15 bis, I-153, I-16, I-16UTI, LaGG 3, and Curtiss P-40M. An eclectic mixture of foreign purchases, loot passed on by Germany, and captured Soviet aircraft - plus the Myrsky which was locally produced.

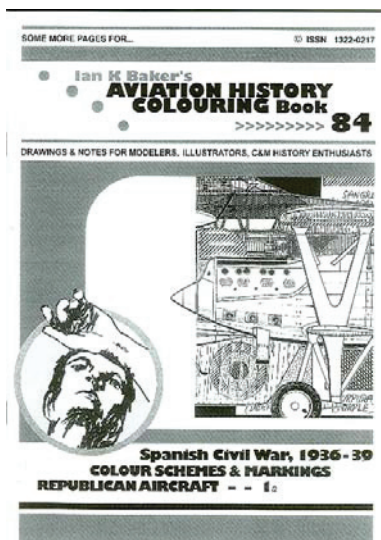
Appendices cover unit structures, aviation ranks, airfields, trainer markings (all Fokker DXXI), aerial victories (with biographies), and units and their aircraft. This is all followed by a bibliography.

Alas! The authors stop short at 1945 thus depriving us of those bizarre early-

post war Bf 09G colour schemes and various other aircraft.

The rear cover announces a soon to arrive volume on Finnish Bomber Colours 1939-45 by the same team and with a very nice colour shot of a Ju88 on the cover!

Malcolm Barratt (#1716), UK.



Spanish Civil War, 1936-39. Colour Schemes & Markings. Republican Aircraft I. by Ian K. Baker. Aviation History Colouring Book #84. 25 A-4 pages including 16 photos, and 9 multi-view tone drawings.

Ian Baker has shifted coverage away from the Pacific to an investigation of the colors of Republican aircraft from the 1936-39 Spanish Civil War. His introduction accurately describes his motivation:

“Opposing air forces in the 1936-39 Spanish Civil War flew a considerable variety of aircraft, their diverse colour schemes and markings making an interesting study.

“Over the years, the c&m of German and Italian aircraft supporting the Nationalist rebels has received some attention. On the other hand, c&m of the Republican government's air forces has remained a much neglected subject, all too often receiving scant attention, typically amounting to little more than a few cursory and repetitive, even misleading, generalizations in words and illustrations.

“Assembling the information contained in *AHCB* 84 & 85 has not lacked the occasional challenge. There remain gaps in available information.

Evolving aircraft finishes and camouflage in the second half of the 1930s have been reasonably well documented for western European military air arms, such as French or Czech for example. But until recently this has not been the case for Soviet Russian aircraft and even now there remain points at issue amongst apparently authoritative sources. And there are certainly lingering problems around the colours applied for camouflage by the Spanish themselves. All of this is discussed.

“The packed pages of these two books include notes on evolving codes, serials and insignia plus extensive and detailed colour notes with colour matchings to FS, Methuen and Pantone. Then follow close studies of 32 actual aircraft, spanning 22 different types.

“It is hoped this piece of work will provide the reader with a usefully comprehensive introduction to this interesting and elusive c&m subject, its knowns and unknowns, and its sometimes subtle complexities.”

#84 begins with a 3-page introduction of the causes of the conflict. This is followed by 2 pages on “National Insignia, Serials & Codes”, and ten 7 pages of “Colour Notes” for Soviet Air Force Colours of the late 1039s”, “Russian Colours for Aircraft Exported to Spain”, and “Some Spanish Colours”. The final 12 pages consists of tone drawings for: Douglas DC-2 EC-AAY, Fokker F.VIIb-3m EC-PPA, Latécoère 28 F-AJVB, Latécoère 28 (identity unknown), Martinsyde F-4 Buzzard ‘11-2’, Hispano-Nieuport 52 ‘11-7’, Hispano-Nieuport 52 ‘11-7’, Savoia-Machetti S-62 (photo only), CASA-Breguet 19 ‘22-41’, & CASA-Breguet 19 ‘31-38’.

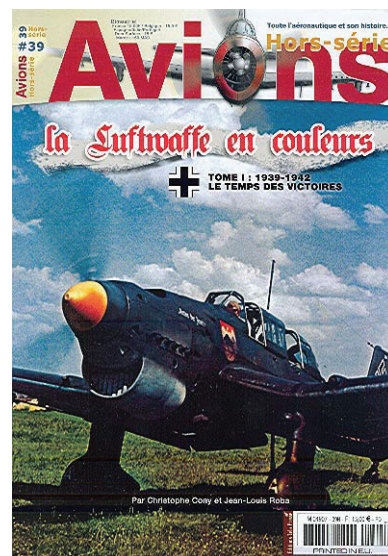
Spanish Civil War, 1936-39. Colour Schemes & Markings. Republican Aircraft 2. by Ian K. Baker. Aviation History Colouring Book #85. 25 A-4 pages including 9 photos, and 22 multi-view tone drawings.

#85 continues the study with tone drawings for: CASA-Vickers Vildebeest ‘T-5’, Vickers Vildebeest ‘T-23’, Potez 542 ‘R’, Aero A-101 ‘La-002’, Dewotone D.371 ‘12’, Dewotone D371 ‘13’, Dewotone D.372 ‘D9’, Polikarpov R-5 ‘RR-27’, Polikarpov R-Z ‘LN-044’, CCF GE-23 ‘AD-014’, Vultee V-1A ‘BV-02’, Potez 25 ‘G71’, Douglas DC-1 ‘EC-

AGN’, Douglas DC-2 ‘EC-AGA’, Polikarpov I-15 ‘CC-011’, Polikarpov I-15 ‘o16’, Polikarpov I-16 Type 5, ‘7’, Polikarpov I-16 Type 10 ‘CM-225’, Tupolev SB ‘7’, Tupolev SB ‘1’, Tupolev SB ‘35’, Tupolev SB ‘BK-069’, & Polikarpov I-152 ‘CC-091’.

AHCBs #84 and #85 will initiate lots of discussion among Spanish Civil War enthusiasts as well as providing the modeler with many interesting color schemes. These books are available directly from Ian K. Baker, 31A Mercer St., Queenscliff, VIC 3225, Australia. Email: ianbaker@arc.net.au.

Luftwaffe en Couleurs, Tome 1: 1939-1943, le temps des victoires by Christophe Cony and J. Loius Roba. Hors-Serie Avions #39. 112 pages 21 mm by 29.7 mm. Softbound. Published Lela Presse. www.avions-bateaux.com.



Luftwaffe en Couleurs, Tome 1: 1939-1943, le temps des victoires by Christophe Cony and J. Loius Roba. Hors-Serie Avions #39. 112 pages 21 mm by 29.7 mm. Softbound. €15.00. Published Lela Presse. www.avions-bateaux.com.

This is a collection of 300 excellently-reproduced color photos; some familiar, but most new to this reviewer. Available directly from the publisher. The review copy is available from the SAFCH Sales Service for \$15.00 plus p&p.



Brazilian Boeing P-12E & F4B-4. 1/32-scale decals. Antarqui Decals, 757 Emory St., Imperial Beach, CA 91932.

Antarqui's latest 1/32-scale decals is a two-aircraft set for Brazilian Boeing fighters: a P-12E of the Brazilian Army and a F4B-4 of the Brazilian Navy. The decal sheets provide all the markings seen on the copies of the instruction sheets reproduced above. This set is enthusiastically recommended for the modeler working in 1/32 scale. This decal set is available directly from Antarqui or from the SAFCH Sales Service (safo@redshift.com) for \$10.00 plus postage.



Pavlov's MiGs: 2015 VVS of Russian MiG-29s. 1/72 and 1/48 decals. Linden Hill

contact@lindenhillimports.com.
www.lindenhillimports.com. LHD 48038 \$20.99. LHD 72034 \$17.99.

These latest decals from our friends at Lindenhill cover contemporary Mig-29 with some interesting individual insignia. The decals and the full-color instruction sheets are identical for both scales. The 1/72-scale decals measures 9 mm by 12 mm, and the 1/48-scale decals measures 19 mm by 12 mm. Both decals are of the usual LHD excellence.

Because of the interesting story behind these decals, I've elected to quote from the instructions verbatim.

"As the defense budget of the Russian Federation has increased exponentially over the last few years, increasing numbers of combat aircraft have undergone long overdue major overhauls and upgrades. Russia's MiG-29 fleet is being overhauled at the 121 ARZ at Kubinka and 275 ARZ at Krasnodar. Kubinka's overhauled MiGs sometimes add a little something 'extra' after being returned to their units in the form of unique artwork, courtesy of journalist, author, photographer, artist and man of many other talents, Anton Pavlov. Our friend Anton has kindly shared some of his latest creations with us, which form the basis for this new Linden Hill Decals set.

The three featured MiG-29 9-13s based at Erebuni, Armenia deserve some additional editorial coverage and context. Erebuni Air Base itself is located only 20 km from Armenia's border with Turkey. Now referred to as the 3624th Air Base (a component of the 102nd Russian Military Base), it was established there in 1994 in the aftermath of Armenia's conflict with Azerbaijan over the disputed mountainous Karabakh region. The Armenian Air Force itself lacked any air defense fighters beyond a single MiG-25. A bilateral treaty between Russia and Armenia now foresees a Russian military aviation presence at Erebuni through 2044. Due to the surrounding mountainous environment of the southern Caucasus and the resultant challenging flying conditions, the 3624th MiG-29 pilots are considered to be some of the most experienced in the VVS. Instructor pilots can be expected to fly 140+ hours per year, with the base commander and flight leaders averaging around 100 hours.

'Red 21', 'Red 23' and 'Red 24' were three Erebuni 9-13s overhauled in March 2014. The orthodox chaplain of the 102nd RMB, Archimandrite Andrey, who was visiting Erebuni when the aircraft returned from Russia, proposed a blessing. The three MiGs were blessed in honor of the orthodox saints Prince Aleksandr Nevskii, Prince Dmitrii Donskoi, and the martyred Mercury of Smolensk (Merkurii Smolenskii).

Fr. Andrey noted that the three are 'especially revered saints who, being warriors, marked their earthly journey with military glory and became saints in the understanding of the Christian tradition. The Church honors them as saints, and soldiers honor them as their patron saints' (source: pravmir.com).

Following the blessing, Anton set to work in decorating the aircraft with portraits of the saints on the starboard side beneath the cockpit area. In mid-2015 all three aircraft were being rotated through QRA duties at Erebuni."

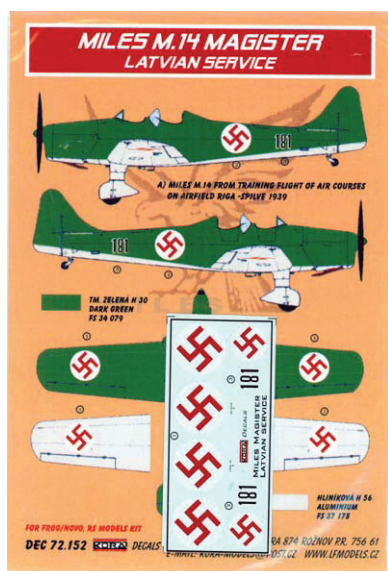
These decals are available directly from Lindenhill. The review decals are available from the SAFO Sales Service for \$17.00 (1/72) and \$21.00 (1/48) including postage.

-letters-letters-letters-letters-letters-letters-letters-letters-letters-letters-

"I have a few remarks about the Antarqui Westland Lysander decals. Unfortunately, they're rather negative. The decals are oversize being nearer 1/32 than 1/48 and most of them need replacing. The tail insignia should have lots of 'fleur de lys' not dashes, though I appreciate this may have been a difficult one due to the lack of available information. My main concern, is as previously, the decals tend to break up on application. They need a good coat of varnish before any attempt is made to apply them. Oh, and putting them on a background colour is not a good idea! Criticisms aside Antarqui should be congratulated for not going down the usual well trodden road when picking subjects.

"I have enclosed a mystery photograph which arrived in a consignment from The Aviation Photograph Company. It's Indonesian, it's indigenous and it might be a 'Kelang' or possibly not. I can't quite read the name on the nose and the internet has been no help. Please feel free to do as you wish with it"

Malcolm Barratt (#1716), UK.



"Some time ago, by sheer mistake, I bought a sheet of decals LF MODELS

C4841 'Magister over Latvia' in 1/48. Alas, my favorite scale is 1/72. Maybe some modeler would be happy to decorate their kit with this rather unusual livery! Price: \$11.00.

"P.S. Latvian Magister decals are available in 72 scale by Kora DEC.72.152."

Christian Hotte (#902), France.

[Editor: Christian and I worked out a deal where I would announce these decals for sale through the SAFO for \$11.00. Christian would keep the decal until it is sold. Then, I'll credit his account with the \$11 received and he would send the decals directly to the buyer. This will save mailing costs and lower the chance that the decals would be damaged in the mails.]

"A much delayed response to the receipt of #153 I'm afraid, but sometimes

real life has an unfortunate habit of intruding!

"Santiago Rivas has provided a very interesting article on an aircraft I have never heard of - namely the FMA Ae MB1 & 2. It never ceases to amaze me what's out there waiting to be discovered. D Y Louie's article on the PLAAF in Korea is a valuable addition to Doug Dildy's work on the North Korean AF. I shall be passing on the Dakota colour schemes to a friend who seems set to model every DC3/C47 ever built. I jest but only just. Thanks to Greg Kozak for the exotica - Nepalese Il-14. Good Grief;- Who knew? Finally Ted Koppel's trawl through 'The Called Brown Condor' is essential to anyone who has the book - which I haven't."

Malcolm Barratt (#1716), UK.

Trinidad and Tobago Defence Force Air Guard

Jorge Delgado

The Air Guard is the aerial arm of the Trinidad & Tobago Defence Force and was established in February 1966. The formation of the unit coincided with the phasing out of United States military presence in the Caribbean. The lone Cessna 337A c/n 337-0441 was operated by the unit for the interception of drug smugglers and SAR missions. It was given the serial TTDF-1. A second Cessna 337A, N5341S, arrived at Piareo on 5 August 1966. These aircraft were replaced in 1972 by the larger Cessna 402B. TTDF-1 was sold as N74184. The color scheme use by this plane during its short service career is one of the most colorful ones of its kind.

Jorge Delgado (#862), Ecuador.

See drawing of this aircraft on page 66.



During a KPAF air defense exercise, on 28 February 1983, 28-year old Captain Lee Ung-Pyong used the opportunity to defect to South Korea, flying this Shenyang F-6C to Seoul. Lee received a commission in the ROKAF and a reward of 1.2billion South Korean Won (about one million US\$) – his aircraft is on display at the ROK Korean War Memorial Museum aircraft park. (Author's Collection)



Recently the markings on Lee's F-6 were corrected to show its true "colors" – nose number "Red 207". On 23 May 1996, South Korea received a second F-6 ("Red 529"), flown by Captain Lee Chul-Su to Suwon AB – he received a more modest 480million Won (US\$400,000), as well as a major's commission in the ROKAF. The disposition of his F-6C is unknown. (Author's Collection)



Snr Lt No Kum-Sok's MiG-15bis is currently exhibited in the National Museum of the US Air Force, at Wright-Patterson AFB, Ohio.
(USAF Museum Photo)



The KPA's Army Aviation Corps was established in 1953 with the KPAF's few remaining Po-2s and Li-2s, supplemented with a handful of Soviet Il-12 "Coach" twin-engine transports, Yak-12 single-engine four-seat liaison aircraft (like the Cessna 190/195/LC-126A) and the first of some 200-300 Antonov An-2 "Colt" large cabin biplanes. During the next two years the all-black An-2s were used to deliver KPA's special forces into South Korea by night landings in open fields. The practice stopped after ROK counter-intelligence and security forces captured one of the "Colts" in the act of doing so – the aircraft "White 3131" is now on display at the ROK War Memorial Museum in Seoul. (Author's Collection)